Santa Clara Valley
Water District

Water Utility Enterprise Report

FINAL

August 2003

Santa Clara Valley
Water District

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AN EQUAL OPPORTUNITY EMPLOYER

August 1, 2003

Dear Board Members:

The *Water Utility Enterprise Report, Final August 2003* presents the financial and water supply information that forms the basis for the adopted water rates for fiscal year 2003–04. This report documents the rates adopted for fiscal year 2003-04 and updates information provided in the preliminary report, which was filed in April, as required by the Santa Clara Valley Water District Act.

The Water Utility's adopted rates for 2003–04 are necessary to fully support the Board's Ends Policies on water supply and quality. The Water Utility's proposed operating budget will meet projected needs of our customers for treated water and groundwater, as well as recycled water. The majority of the capital outlays in the coming years are committed to improving drinking water quality by converting our three treatment plants to use ozone as the primary disinfectant.

The outlook for FY 2003–04 is for no growth in water deliveries, but growing expenditures in key areas: continuing needs to ensure the security of our storage and production facilities, costs to import water, and labor costs. Planning for the upcoming year reflects uncertainty in the local economy and the unsettled State budget. In addition, a new contaminant, perchlorate, threatens groundwater resources in parts of the Llagas groundwater basin. We are dealing aggressively with this problem and pursuing cost recovery from any identified responsible parties.

The rates adopted for 2003–04 will support the operating and capital budget for the Water Utility. The North County Municipal and Industrial rate for groundwater will increase by 10.3% from $340 per acre-foot to $375 per acre-foot. Likewise, the South County Municipal and Industrial rate will increase by 14.3% from $140 per acre-foot to $160 per acre-foot. *Corresponding rates for agricultural water were adopted at $37.50 per acre-foot in North County* and $16 per acre-foot in South County.

The Board adopted staff's recommendation to increase the surcharge rates for contract and non-contract treated water to moderate usage of surface water. The surcharge on treated water scheduled for delivery under the contracts with retail agencies was adopted at $85 per acre-foot. The surcharge on treated water delivered in excess of scheduled contract amounts from Rinconada Water Treatment Plant was adopted at $45 per acre-foot.

The attached report includes historical data on District water supply and demand, describes the benefits of the District's activities, and provides financial projections for the next 10 years.

Sincerely,

Stanley M. Williams

Stanley M. Williams
Chief Executive Officer

TD285S3K3 W42 003c.2

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WATER UTILITY ENTERPRISE REPORT

FINAL

SANTA CLARA VALLEY WATER DISTRICT

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AUGUST 2003

DISTRICT BOARD OF DIRECTORS

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PREFACE

This is the 32nd annual report on the status of the Santa Clara Valley Water District's (District) Water Utility Enterprise. In accordance with Section 26.5 of the District Act, the District annually prepares a written report on its activities to protect and augment its water supplies. As required by the District Act, this report provides information on the present and future water requirements of Santa Clara County (County), the water supply available to the District, future capital improvement and maintenance and operating requirements, financing methods, and the water charges by zone for agricultural water and nonagricultural water

ACRONYMS

AF	Acre Feet
AG	Agricultural
BMP	Best Management Practices
CAA	Clean Air Act
CIP	Capital Improvement Plan
CVP	Central Valley Project
CVPIA	Central Valley Water Project Improvement Act
CWA	Clean Water Act
DSOD	Division of Safety of Dams
DWR	Department of Water Resources
EPA	Environmental Protection Agency
ESA	Endangered Species Act
ET	Evapotranspiration
EWA	Environmental Water Account
FAHCE	Fisheries and Aquatic Habitat Collaborative Effort
FPEIR/S	Final Programmatic Environmental Impact Report/Statement
FY	Fiscal Year
HAZMAT	Hazardous Materials
INAAP	In-field Nutrient Assessment Assistance Program
ISMP	Information Systems Management Plan
IWRP	Integrated Water Resources Plan
LTA	Long-term average
LUSTOP	Leaking Underground Storage Tank Oversight Program
M&I	Municipal and Industrial
MTBE	Methyl Tert-Butyl Ether
MWD	Metropolitan Water District of Southern California
OPA	Office of Public Affairs
PCE	Perchloroethylene
PEAP	Performance Efficiency and Accountability Program
PERS	Public Employees Retirement System
PPB	Parts Per Billion
PWTP	Penitencia Water Treatment Plant
ROD	Record of Decision
RWQCB	Regional Water Quality Control Board
RWTP	Rinconada Water Treatment Plant
SBWRP	South Bay Water Recycling Program
SCRWA	South County Regional Wastewater Authority
SCVURPPP	Santa Clara Valley Urban Runoff Pollution Prevention Program
SDWA	Safe Drinking Water Act
SFWD	San Francisco Water District
SFPUC	San Francisco Public Utility Commission
STWTP	Santa Teresa Water Treatment Plant
SWP	State Water Project
T&D	Transmission and Distribution
ULFT	Ultra-low-flush Toilets
UST	Underground Storage Tank
WET	Water Efficient Technologies
WMI	Watershed Management Initiative
WTP	Water Treatment Plant

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I. ADOPTED WATER RATES AND SUMMARY

INTRODUCTION

The Santa Clara Valley Water District (District) is the water resource management agency that provides a safe and reliable water supply to the County's 1.7 million residents. The District's Water Utility budget and rate strategies for fiscal year (FY) 2003–04 are designed to provide revenues to pay the full cost of the County's water supply and to maintain fisheries, water quality, and other beneficial uses. The District continues to support water conservation and water recycling activities to moderate demands for additional water supplies.

The District's major sources of revenue are from the imposition of charges on groundwater and from contracts for the sale of treated surface water produced by its three treatment plants. The District is required by State law to assess the need for groundwater charges annually and to prepare this report to describe the activities undertaken to provide a water supply, along with the associated capital, maintenance, and operating requirements. The report must also describe the financing methods and recommended water charges for zones of use established by the District Board of Directors.

This introductory section summarizes Water Utility rates adopted for FY 2003–04 and Sections II, III and IV. Details of the rate components and other charges are presented in Appendix A.

ADOPTED WATER RATES FOR FISCAL YEAR 2003–04

Since the District's 2002 water rate study, several new factors have emerged which have had a negative impact on cost and revenue projections. The impact of these new factors, without any offsetting management action, would have been to double the previously-projected rate increases for FY 2003–04.

Two new factors have negatively impacted the revenue projection. The first is that staff has reduced the water demand projection because actual water consumption has been relatively flat over the past three fiscal years (FY 1999–00 through FY 2001–02), and because of water consumption feedback from the water retailers. Second, staff has decreased the water utility's investment portfolio earnings rate assumption as a result of the continuing low interest rates.

Several new factors have impacted the cost projection. The labor cost projection has increased as a result of rising public employees retirement system (PERS) and health and dental insurance costs, as well as new labor agreements. Higher state and federal water project costs have also contributed to the rising cost projection. However, implementing the District's commercial paper debt financing program lowered debt service projections, partially offsetting the above increases.

In January, staff met with the water retailers' committee to discuss the revenue shortfalls and cost increases identified above. Staff agreed to work with the Water Retailer Finance Subcommittee to begin working on ways to moderate the necessary rate increase. In late January, the District's CEO, Stan Williams, issued District-wide budget guidance that called for an overall operation budget increase of no more that 3%.

After working with the water retailers, staff reduced the recommended rates down to the levels projected last year, which the Board adopted. As shown in Table 1-1, the Board adopted a $375 per acre – foot (AF) groundwater charge for municipal and industrial (M&I) water in the North County for FY 2003–04. For South County, the Board adopted a $160 per AF groundwater charge for M&I water for FY 2003–04. As in recent years, the Board set the rates for agricultural water at 10 percent of the M&I rates for FY 2003–04. The water rate increases for FY 2003–04 are necessary to offset the decline in investment earnings, and to cover the year-to-year increase in operations costs.

The surcharge on treated water delivered under the contracts with retail agencies will increase to $85 per AF. The District has the discretion to make available treated water in excess of the retailers' basic contract amounts, so-called noncontract treated water, "... at such times and such prices as determined by the District." The availability of noncontract deliveries will be suspended when necessary to accommodate construction activities scheduled for Rinconada Water Treatment Plant (RWTP). The amount of the surcharge on noncontract water affects the retailers' decisions on whether to pump groundwater or purchase treated water. For FY 2003–04, the Board adopted increasing the surcharge on noncontract water from RWTP to $45 per AF. Increasing both the treated water surcharge and the non-contract surcharge is expected to encourage retailers to scale back use of treated water. This will result in increased usage of the groundwater basin, which is relatively full.

The Board adopted staff's recommendation to provide discounts up to $4.50 per AF for qualified users of agricultural water. The Mobile lab discount will continue at $2.50 per AF. Program changes include proposals to make the qualification criteria more restrictive, as well as implement a limit to the duration of qualification. In addition, a $2.00 discount is available to eligible growers who participate in the In-field Nutrient Assessment Assistance Program (INAAP). The program is designed to offer growers soil testing and consultation so that fertilization decisions will be based increasingly on data gathered from field samples. See Section III for further details on the Mobile Lab program and INAAP.

HISTORICAL RATE INCREASES

In 1998, the District conducted an extensive analysis of the long-term capital and operating needs of the Water Utility and prepared a ten-year projection of the water rates and revenue bond financing that would be necessary to provide a reliable, high-quality water supply to the County. Alternative rate projections were discussed extensively with the water retailers, and a decision was reached to begin a series of rate increases, expected to lead to rates 50 percent above the 1998 level by 2004 (see Section IV).

In each of the past five years, the Board has adopted staff's recommendation to follow along the path of rate increases projected in 1998. FY 2002–03 was the final year of the five-year rate increase projection, and the District was able to hold to the 1998 rate increase commitment despite rising electric and security costs, and initiating an asset management program.

Table 1-1 shows the water rates in fiscal years, 2000–01, 2001–02 and 2002–03. The final column contains the adopted rates for FY 2003–04, which are in accordance with the pricing policy exhibited in Appendix B.

As requested by the water retailers, the District provided a three-year projection that customers could use in their planning and budgeting (see Figure 1-1); however, the cost pressures facing the District, when combined with the local economic conditions and the lack of a State budget,

preclude staff from making any short- or long-term assurances. The Board passed a motion stating their intent to adopt the rates projected over the next 3 years (FY 2003-04 to FY 2005-06). The projected rates will be updated annually to add another year.

TABLE 1-1
Summary of Water Charges

(Dollars Per Acre-Foot, $/AF)

	2000–01	2001–02	2002–03	Adopted 2003–04
Zone W-2 (North County)				
Basic User Charge	310.00	330.00	340.00	375.00
Treated Water Surcharge				
Contract	70.00	80.00	80.00	85.00
Noncontract*	0.00	20.00	20.00	45.00
Zone W-2 (North County)				
Total Treated Water Charge				
Contract	380.00	410.00	420.00	460.00
Noncontract*	310.00	350.00	360.00	420.00
Zone W-2 (North County)				
Groundwater Charge				
Municipal & Industrial	310.00	330.00	340.00	375.00
Agricultural	31.00	33.00	34.00	37.50
Net Agricultural (With Mobile Lab & INAAP Discounts)		31.50	31.50	33.00
Zone W-5 (South County)				
Groundwater Charge				
Municipal & Industrial	115.00	130.00	140.00	160.00
Agricultural	11.50	13.00	14.00	16.00
Net Agricultural (With Mobile Lab & INAAP Discounts)		11.50	11.50	11.50

Note: Treated water is provided only in Zone W-2; the total charge adopted for contract treated water is the sum of $375 plus $85 or $460 per AF. Non-contract water will be available only from the Rinconada Water Treatment Plant in FY 2003–04, but non-contract deliveries will likely be limited during future construction periods.

SUMMARY

Section II

Section II presents data on the County's water supply and water usage. Water supply records indicate a somewhat stable trend over the past three calendar years, 2001 through 2003. Water use in calendar year 2002 was relatively flat compared to 2001. In 2001, water usage was recorded at 385,900 AF, and in 2002, at 382,400 AF. Water use in 2003 is projected to be 386,900 AF.

Section III

Section III describes water supply and quality challenges facing the Water Utility and the District activities to address them. The activities exhibit the District's continuing efforts to conserve and augment its water supplies and are the primary reason for the need for water charges. A major operations project that will likely continue into FY 2003–04 is the perchlorate contamination cleanup in the San Martin area. Capital projects at the

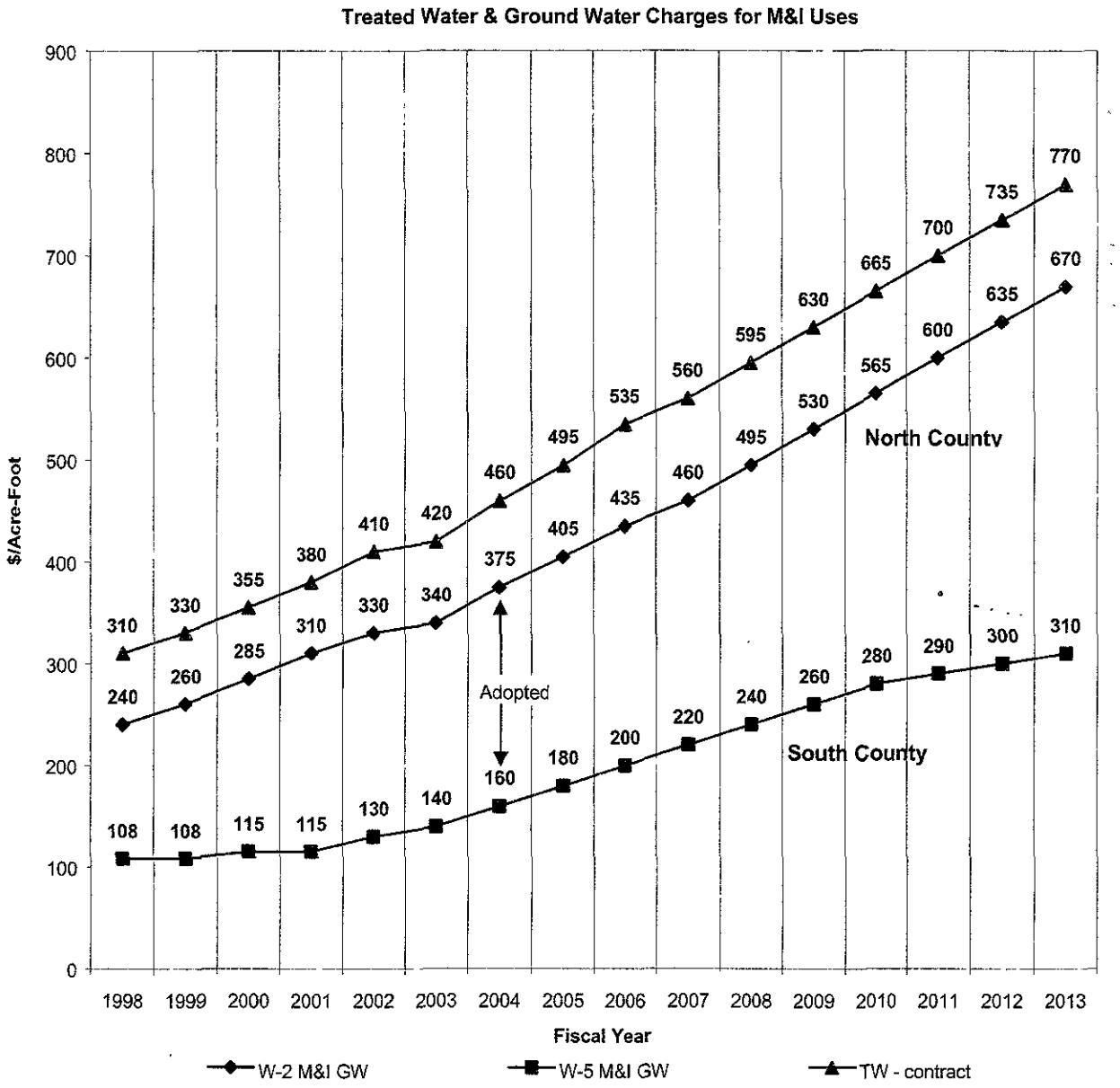
forefront of the District's plans in FY 2003–04 include South County Recycled Water Improvement Projects, Almaden Dam Outlet Works, Lenihan Dam Outlet Modifications, New Water Quality Laboratory, and Stage 2 of the Treated Water Improvement Projects.

Section IV

Section IV discusses the revenue required to meet needs in FY 2003–04 and describes the financial analysis for the two water charge zones. This section also includes a projection of the Water Utility finances over the next 10 years. For FY 2003–04, the District will see higher water rates resulting primarily from increased operating costs related to rising labor costs, as well as increased capital costs related to the New Water Quality Laboratory and Stage 2 Treated Water Improvement construction at Santa Teresa and Penitencia Water Treatment Plants. The overall revenue requirement for FY 2003–04 is projected to be $178.9 million. The Water Utility program requirements will be met from a combination of current revenues, reserves, and debt.

As illustrated in the following figure, North County groundwater rates are currently projected to increase at an average of 7.2% per year between FY 2003–04 and FY 2008–09 compared to 7.6% per year over the last five years. The total incremental revenue between FY 2003–04 and FY 2012–13 will be used to fund increased operating costs driven by steep increases in the cost of federal water and higher water treatment costs as a result of converting to the use of ozone as the primary disinfectant. Higher rates are also needed to pay debt service on capital expenditures currently underway and future construction at reservoirs and water treatment plants.

FIGURE 1-1
Ten- Year Rate Projection



II. SANTA CLARA COUNTY WATER REQUIREMENTS AND SUPPLIES

LONG-TERM WATER USE TRENDS

Water use in the County is categorized as either agricultural or M&I. Recorded North County water use since FY 1964–65 and South County water use since FY 1987–88 (when the District merged with Gavilan Water Conservation District) is shown in Figures 2-1 and 2-2, respectively. Metcalf Road is the dividing line between North County Zone W-2 and South County Zone W-5 (see map of Water Utility Zones in Appendix C).

Both District and non-District water use in North County, as shown in Figure 2-1, is predominantly M&I. Projections from the Integrated Water Resources Plan (IWRP) indicate an increase in M&I use through 2020, when the North County annual M&I water use is projected to be 354,000 AF. Agricultural water use is expected to be approximately 1,000 AF per year by the year 2020 in North County, or less than one percent of the total North County water use.

In South County, it is anticipated that M&I water use will continue to increase while agricultural use is expected to decline (see Figure 2-2). The latest projections for South County anticipate total water use of about 72,000 AF by the year 2020. M&I and agricultural water uses are projected to be 45,000 AF and 27,000 AF that year, respectively.

The projected water usage for the County discussed above totals 427,000 AF in 2020. This represents the likely outcome of many factors, including population trends, employment growth, and water conservation practices. Alternative population and economic assumptions could lead to total County water needs ranging from as low as 416,000 AF to as high as 478,000 AF in 2020.

The drought and economic downturn during the early 1990s drove a decrease in the County water use from 1987 to 1991. District records show the total per capita water use was 231 gallons per day in 1988. By 1991, the per capita use dropped steadily to 171 gallons per day. Once drought conditions and the economic recession eased, the County began a general upward trend in water consumption from 1992 to 1997. For this time period, the per capita water use gradually increased from 182 gallons per day to 210 gallons per day. Water use dropped to 185 gallons per capita per day in 1998 due in part to unusually wet weather early in the year, which helped reduce demand for water used in agriculture and landscaping. Since 1998, per capita water use gradually increased to 199 gallons per day in 2002.

LONG-TERM WATER SUPPLY OUTLOOK

The District's water supply includes water imported from the Sacramento-San Joaquin Delta, local water stored in reservoirs and groundwater subbasins, water banked in San Joaquin Valley, and recycled water. The Santa Clara groundwater subbasin is in the North County, while both the Coyote and Llagas groundwater subbasins are in South County (see Groundwater Subbasins and Major Recharge Systems Map in Appendix C).

Sources of water supply in North County consist of locally developed water, recycled water, and water imported via the State Water Project (SWP), the Federal Central Valley Project (CVP), and the City and County of San Francisco's Bay Division Pipelines (Hetch Hetchy). South

County is supplied by locally developed water, recycled water, and CVP water imported via the San Felipe Division. The recorded water supply in North County since FY 1964–65 is shown in Figure 2-3, and South County since FY 1987–88 is shown in Figure 2-4. Projected supplies of local, recycled and imported water are shown to the year 2020. Projected supply availability figures are based on the long term average (LTA) supply projections to the year 2020 presented in the District's ongoing IWRP. As can be seen in the historical data, the District is often unable to use all of the imported water available in a year.

In working toward ensuring a reliable future water supply, the District is engaged in several activities. Within the County, the District continues its conjunctive use program of recharging surface water to augment groundwater supplies. Additionally, the District is providing financial incentives to wastewater agencies for delivery of recycled water for nonpotable uses and has signed a partnership agreement with the City of San Jose to explore the future development of recycled water. Local supplies will continue to be supplemented in the future with nonpotable water from recycled water facilities in San Jose, Sunnyvale, and the South County Regional Wastewater Authority (SCRWA) serving Gilroy and Morgan Hill.

The District, along with numerous other urban water agencies, is participating in the statewide Water Conservation Memorandum of Understanding to implement 16 urban water use best management practices (BMP). In addition, the District manages urban water use conservation programs beyond the BMPs and is implementing agriculture water conservation practices as required under the CVP Improvement Act (CVPIA). These activities are more fully described in Section III, Benefits and Services Provided by the District.

DISTRICT WATER SUPPLIES AND USE

The following tables show calendar year activities for 2001 and 2002 and the plan for calendar year 2003 reservoir operations, raw water conveyance, treated water production, and groundwater recharge. Table 2-1 summarizes water use recorded and projected in the County for calendar years 2001, 2002 and 2003. Table 2-2 documents District and non-District annual water supply and distribution management activities, and Table 2-3 summarizes District out-of-county water banking activities for those three years. The differences between Tables 2-1 and 2-2 can be accounted for by changes in surface water and groundwater storage. Moreover, Table 2-2 summarizes only those supplies managed by the District or other agencies. The groundwater basin is also replenished by naturally occurring recharge in areas not managed by the District or others.

FIGURE 2-1
North Santa Clara County Water Use
Zone W-2

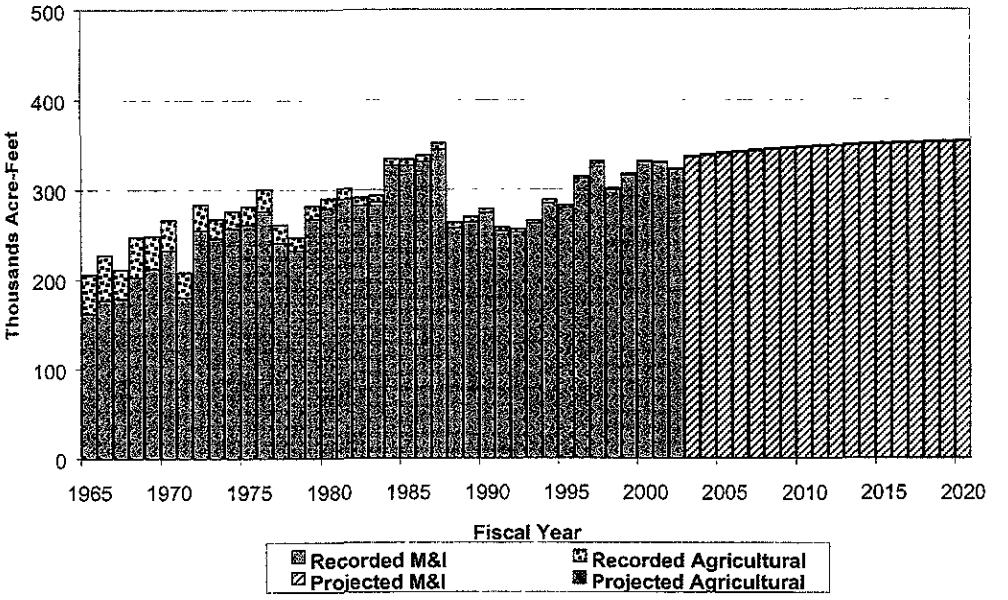


FIGURE 2-2
South Santa Clara County Water Use
Zone W-5

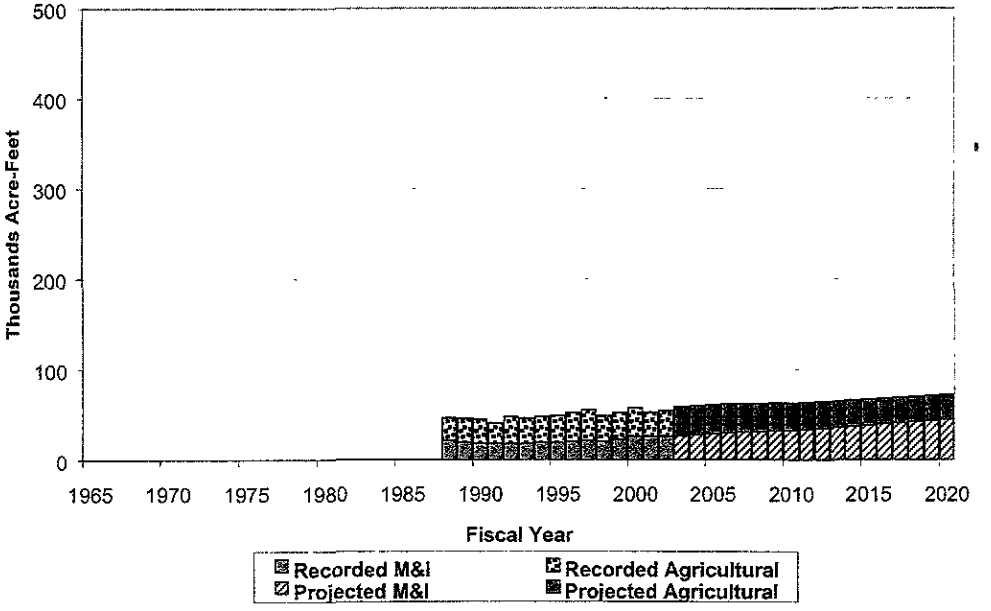


FIGURE 2-3
North Santa Clara County Water Supply
Zone W-2

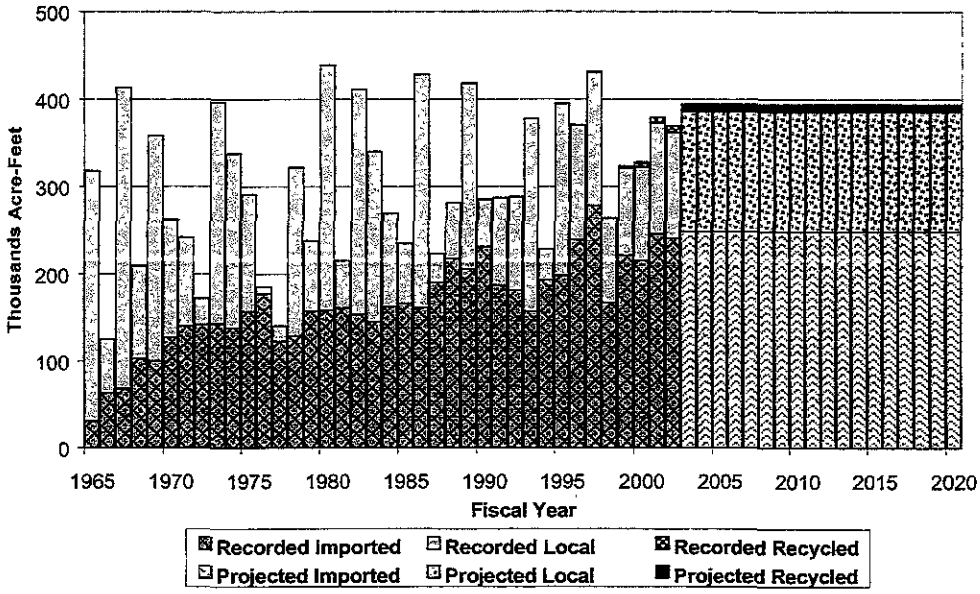
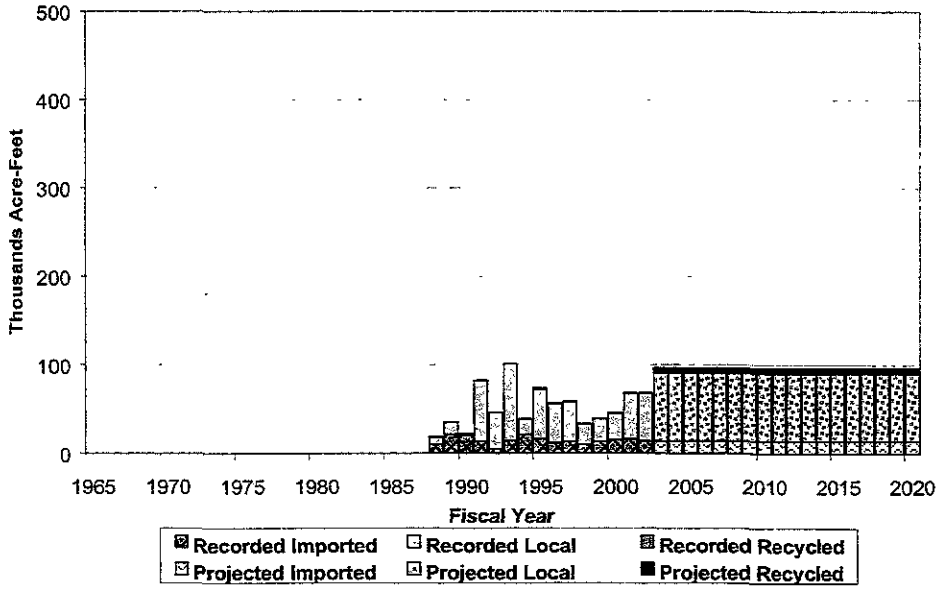


FIGURE 2-4
South Santa Clara County Water Supply
Zone W-5



Note: North and South County projected supply *availability* figures are based on the long term average (LTA) supply projections to the year 2020 presented in the District's ongoing January 1997 Integrated Water Resources Plan (IWRP). Recorded supply figures reflect the amounts of supply *taken*. Supplies *taken* are often less than the supplies *available*. On average, records show that between 1992 and 2001, 89 percent of the SWP LTA water has been taken. In this same time period, an average of 72 percent of the CVP LTA has been taken.

TABLE 2-1
Water Use for Calendar Years 2001 Through 2003 (Acre-Feet)
Santa Clara County

	Actual 2001	Estimated 2002	Projected 2003
I. WATER PRODUCTION			
In-District Groundwater Pumping	169,200	157,800	163,800
District Treated Water	134,200	143,800	138,600
District Surface Water Irrigation	3,100	3,100	3,100
Recycled Water	600	500	600
Non-District (Import, Local, & Recycled)	78,800	77,200	80,800
TOTAL WATER PRODUCTION	**385,900**	**382,400**	**386,900**
II. WATER USE			
District Municipal & Industrial	276,900	275,900	275,490
District Agricultural	30,200	29,300	30,610
Non-District (Import, Local, & Recycled)	78,800	77,200	80,800
TOTAL WATER USE	**385,900**	**382,400**	**386,900**

Recorded Operations for Calendar Year 2001

In 2001, the total water use in the County was 385,900 AF. Rainfall in the 2001 calendar year totaled 13.19 inches in downtown San Jose, about 93 percent of average. Water use from District sources included 276,900 AF of M&I and 30,200 AF of agricultural water. Non-District use totaled 78,800 AF provided by non-District sources (Hetch Hetchy, Stanford/San Jose reservoirs, and recycled water deliveries). Of the District water used, 169,200 AF were provided through groundwater pumping, 600 AF through recycled water, and 134,200 AF were delivered from our three water treatment plants. In addition, 3,100 AF were delivered from surface waters for direct use. Table 2-1 presents a detailed look at the in-county water demand.

Table 2-2, which excludes natural recharge, depicts how the water supply was managed and distributed in 2001. The District imported approximately 198,400 AF of water from the State and Federal Water Projects, and received approximately 6,100 AF of water from the intertie with the San Francisco Water District (SFWD). It released approximately 56,000 AF from its reservoirs for groundwater recharge or treatment in one of our three treatment plants. The remainder of the District demand was met with natural recharge or carryover storage from our groundwater basins.

TABLE 2-2
Annual Water Supply And Distribution For Calendar Years 2001 Through 2003 (Acre-Feet)
Santa Clara County

Water Supply	Actual 2001	Estimated 2002	Projected 2003
I. ANNUAL WATER SUPPLY			
District Supply			
Imported Water To County			
SFWD Intertie	6,084	410	-
CVP Imports	150,500	134,270	115,800
State Water Project Imports	47,920	58,880	77,900
Total District Imports	204,504	193,560	193,700
Local Surface Water	*56,040*	*72,340*	*71,800*
Non-District Supplies			
Hetch Hetchy	62,904	61,020	62,300
Other Reservoirs and Streams (San Jose/Stanford)	8,440	8,370	10,400
Recycled Water	7,430	7,810	8,100
TOTAL	**339,318**	**343,100**	**346,300**
II. DISTRIBUTION OF ANNUAL WATER SUPPLY			
Distribution Within District System			
To Treated Water	134,170	143,770	138,600
To Surface Water: Irrigation/Environment	9,674	15,170	16,500
To Managed Recharge			
Santa Clara Groundwater Subbasin	93,100	71,660	81,600
Coyote & Llagas Groundwater Subbasins	23,600	35,300	28,800
Subtotal of Distribution to District System	**260,544**	**265,900**	**265,500**
Non-District Distribution			
Hetch Hetchy	62,904	61,020	62,300
San Jose/Stanford	8,440	8,370	10,400
Recycled Water	7,430	7,810	8,100
Subtotal of Non-District Distribution	**78,774**	**77,200**	**80,800**
TOTAL	**339,318**	**343,100**	**346,300**

Note: The annual water supplies reported in this table include only volumes managed by the District and others that are readily estimated. In addition to the managed recharged data included in the table, County groundwater supplies are augmented by naturally occurring recharge each winter and spring. These 'unmanaged' amounts are essential to County groundwater supplies and allow for the fact that the in-district groundwater pumping volumes in Table 2-1 usually exceed the annual managed recharge.

Estimated Operations for Calendar Year 2002

In 2002, the total water use in the County was 382,400 AF. Rainfall in the 2002 calendar year totaled 11.06 inches in downtown San Jose, which is approximately 78 percent of average. Total water use includes 275,900 AF of M&I and 29,300 AF of agricultural water. It also includes 77,200 AF provided by non-District contractors (Hetch Hetchy, Stanford/San Jose reservoirs, and recycled water deliveries). Of the District water used, 157,800 AF was provided through groundwater pumping, 500 AF through recycled water, and 143,800 AF was delivered from our three water treatment plants. In addition, 3,100 AF was delivered from surface waters for direct use. Table 2-1, which includes supplies available from natural recharge, presents a detailed look at the in-county water demand in 2002.

Table 2-2, which excludes natural recharge, presents how the water supply was managed and distributed in 2002. The District imported approximately 193,600 AF of water from three sources. In addition to its SWP and CVP supplies, the District received water from a recently completed intertie with the San Francisco Water District (SFWD). The intertie provided 410 AF to help meet treated water needs while PWTP was closed for construction. Local water releases totaled approximately 72,340 AF for delivery to groundwater recharge ponds or one of our three treatment plants. The remainder of the District demand was met with natural recharge or carryover storage from our groundwater basins.

Projected Operations for Calendar Year 2003

The District's annual Operations Plan describes how supplies available to Santa Clara County will be used. A preliminary plan based on conditions known in May 2003 is summarized in Table 2-2. As of June 30, 2003, the 10 District reservoirs had a combined storage of approximately 97,643 AF, or about 57.6 percent of capacity, compared to 45.8 percent in June 30, 2002.

Imported water supplies are currently projected to be less than the District's contractual entitlements. As of May 16, 2003, the Department of Water Resources (DWR) announced that 90 percent (compared to 70 percent finalized for last year) of the SWP entitlement of 100,000 AF will be available to the District. And, on May 22, 2003, the Bureau of Reclamation announced allocations of 70 percent (compared to 70 percent finalized for last year) of the 33,100 AF of CVP agricultural water, and 75 percent (compared to 75 percent finalized for last year) of the 119,400 AF of CVP M&I water entitlements. However, due to the District's Reallocation Agreement, the District will receive up to 97,500 AF of M&I water from CVP. This would result in a total supply of approximately 120,670 AF of CVP water and 90,000 AF of SWP water, for a total of 210,670 AF of imported water.

In addition to the imported water allocated entitlement amounts of 210,670 AF, the District will receive exchange, transfer and carryover amounts in 2003. We plan to use 193,700 AF in county and bank the remainder.

The District's 2003 Operation Plan provides projections of how District managed water (locally conserved and imported water) and other sources (Hetch Hetchy, recycled water and San Jose and Stanford stored surface water) will be distributed to efficiently use recharge facilities and provide treated water to meet demands. Table 2-2 shows the

planned distribution of the projected supplies of 346,300 AF for 2003. The difference between projected supplies and the projected demand shown in Table 2-1 can easily be met from natural recharge and available storage in the groundwater basins.

Banking and Reallocations

To provide reliability in future dry years, the District banks water in groundwater storage outside of the County. Primarily, the District banks State Water at the Semitropic Water Storage District in Kern County. Table 2-3 shows the annual changes and year-end balances for banked water during calendar years 2001 through 2003. The District anticipates delivering at least 20,000 AF to storage in 2003.

In 2001, the District sold 30,000 AF from its Semitropic Storage to the State of California in support of the CALFED Environmental Water Account (EWA). The EWA is more thoroughly discussed in Section III.

To further increase reliability against future drought, in 1997 the District executed a Water Reallocation Agreement with the US Bureau of Reclamation and agricultural districts in the San Luis and Delta-Mendota Water Authority. This 25-year agreement resolved disputes related to the US Bureau of Reclamation's M&I Water Shortage Policy that provides CVP M&I water allocations of no less than 75 percent of historic use under most shortage conditions. In addition, Westlands and San Luis Water Districts agreed to augment the District's supplies in certain years to bring District CVP M&I reliability up to 75 percent of contract amount. In return, the District has reallocated 100,000 AF of CVP water to the agricultural districts, and will continue to optimize water supplies to reallocate more water if possible over the term of the agreement.

In recent years, the District has exchanged CVP allocations with San Benito County Water District, in order to improve water management by taking advantage of a difference in each district's contract year. The District purchases water for San Benito in summer months in return for San Benito returning a like amount, usually about 14,000 to 15,000 AF, to the District in January and February. This agreement allows the District to "hedge" against the CVP allocating a reduced supply in the following contract year. For the first time, in November 2002, the District and San Benito exchanged CVP allocations in the reverse direction, with San Benito purchasing 2,000 AF for the District at the end of 2002 and early 2003, in return for the District's obligation to return a like amount, subject to certain conditions, later in 2003. The District has also participated in a small, trial water banking program with San Benito utilizing San Justo Reservoir. This program provided limited benefits to the District.

TABLE 2-3

District Water Banking for Calendar Years 2001 Through 2003

Water Banking	Actual 2001	Actual 2002	Estimated 2003
SEMITROPIC WATER STORAGE DISTRICT (SWP WATER)			
Beginning Balance (January 1)	141,777	111,777	114,777
District Deposit or Withdrawal	0	3,311	20,000
Environmental Water Account (EWA) Withdrawal	-30,000	0	0
Transaction Losses	0	-311	-2,000
Ending Balance (December 31)	**111,777**	**114,777**	**132,777**
SAN BENITO COUNTY—SAN JUSTO RESERVOIR (CVP WATER)			
Beginning Balance (January 1)	1,406	0	0
Change in Storage—Bank Deposit or Withdrawal	-1,388	0	0
Transaction Losses	-18	0	0
Ending Balance (December 31)	**0**	**0**	**0**
TOTAL BANKED ENDING BALANCE (DECEMBER 31)	**111,777**	**114,777**	**132,777**

III. BENEFITS AND SERVICES PROVIDED BY THE DISTRICT

Section 26.5 of the District Act specifies that this annual report provide details on the District's "...activities in the protection and augmentation of the water supplies of the district." Protecting available resources and planning for and augmenting future supplies requires that the District levy charges on the production of groundwater and enter into financial contracts for the delivery of treated surface water. The importation of water and management of local water supplies requires that the District undertake a wide range of supporting functions. This section describes the benefits and services that the District provides under the general headings of:

- Overall Resource Management
- Water Supply Augmentation
- Water Quality Protection
- Capital Improvements

OVERALL RESOURCE MANAGEMENT

Long-Term Planning for Water Supply

As the water management agency and water wholesaler for Santa Clara County, the District is responsible for planning the County's long-term water supply. Ensuring a safe and reliable water supply in the face of periodic droughts and increasing competition for water supplies from other urban, agricultural and environmental water users throughout the state is a significant challenge. In February 2002, the District joined with other water agencies to form the Bay Area Water Agencies Coalition. This team will create a unified voice for Bay Area water suppliers and provide a forum to discuss regional water issues.

The District is currently updating its 1997 IWRP, which was first developed and accepted by the District Board of Directors in January 1997. The IWRP is designed to be an on-going process that provides a framework for the District to evaluate water supply investment options and implement programs and projects to meet the Board's policy that "There is a reliable supply of healthy, clean drinking water." The IWRP is also designed to provide an incremental and flexible implementation strategy in order to be able to plan for and react to the many unknown challenges of the future.

The main challenges that IWRP addresses include: dry year supply shortages, drinking water quality concerns related to both surface water and groundwater, population growth statewide and in the County, environmental water needs and fisheries protection measures that impact the reliability of imported and local water supplies, infrastructure failure risks, unanticipated changes in water demand due to land use changes, long-term climate changes that impacts availability of water supplies and controlling costs.

The IWRP update will recommend a number of near-term actions to be implemented between now and 2010, as well as strategies to keep longer-term options open. As near-term actions are being implemented, the District will continuously monitor for risks as well as opportunities that could trigger the need for longer-term water supply investments.

Foremost in the District's IWRP strategy is the need to develop and promote partnerships that are essential to implementation success. The District will continue to actively participate in statewide, regional and local planning processes and promote strategic partnerships that can provide regulatory certainty and facilitate program and project implementation.

Stream and Watershed Management

The District plays a key role in balancing the water needs of a growing economy with those of the environment. The District has initiated a watershed management approach as a responsible steward of watersheds, including streams and riparian corridors. For example, in October 1997, the Fisheries and Aquatic Habitat Collaborative Effort (FAHCE), which is comprised of the District, the California Department of Fish and Game, National Marine Fisheries Service, U.S. Fish and Wildlife Service, Natural Heritage Institute and the City of San Jose was formed to study the aquatic habitats in our managed streams and the impacts on them from District facilities and operations.

Another collaborative effort is the Santa Clara Basin Watershed Management Initiative (WMI). Since 1996, the District has been working with members from the business, public, environmental, civic and agricultural arenas, as well as professional and trade organizations and regional and local public agencies. WMI's goal is to use a consensus approach to create a comprehensive watershed action plan.

Stream maintenance projects are planned, designed, constructed, and operated in an environmentally sensitive manner to address reservoir water storage, and in-stream and off-stream groundwater recharge. Project specific measures are taken to protect sensitive species, water quality, fisheries, riparian and wetland resources. New management practices include scheduling the work to avoid impacts to nesting birds, removing sediment from half of the channel in alternating years on certain creeks, diverting flows around a work site, reseeding disturbed areas, and relocating fish.

Changes in land use and new developments can negatively impact water quality and District facilities. To minimize these impacts, the District's Community Projects Review Unit enforces the District's Ordinance 83-2, which regulates activities near District facilities, reviews external environmental documents, and coordinates with cities and other agencies with regard to their land use decisions.

Together, the foregoing activities strive to protect County habitat, while accommodating water supply and other human impacts.

Flood Protection and Stream Stewardship Program

To address community expectations and the District Board's Ends Policies on quality of life in the County, the District is using additional funding from its voter-approved Special Tax to provide for restoration and enhancement of natural resources within our watersheds. This element is an important part of the Clean, Safe Creeks and Natural Flood Protection Plan approved by County voters in November 2000.

The Clean, Safe Creeks plan will also protect water quality in our creeks and bays, and will benefit water supplies. Portions of the additional funding will be used to keep our creeks cleaner and free from trash and pursue improved detection and management of

toxic materials (such as mercury and diazinon) that pollute our water supplies, creeks and Bay.

The District also participates in the Santa Clara Valley Urban Runoff Pollution Prevention Program (SCVURPPP) as a co-permittee. The objective of the SCVURPPP is to protect stream resources by preventing pollution from entering our creeks and the Bay. Each of the co-permittees implements its own, agency-specific storm water pollution prevention program. These activities, and the level of implementation, are specified in Performance Standards. Currently, the District implements Performance Standards for:

- Illicit Connection and Illegal Dumping Elimination Activities
- Industrial/Commercial Discharger Control Program
- Public Streets, Roads, and Highways Operation and Maintenance
- Storm Drain System Operation and Maintenance
- Water Utility Operation and Maintenance
- Planning Procedures
- Construction Inspection

In addition, the District collaborates in various program-wide efforts, including public education and monitoring.

Hydrologic Data Management

The District supports numerous data collection and analysis efforts covering rainfall, stream flows, reservoir storage, water use, groundwater levels, and other information that is essential to planning and operating our water distribution and delivery system.

Public Affairs

The Office of Public Affairs (OPA) supports and facilitates the Board of Directors' link to the general public, public officials, community leaders and policy makers and works in partnership with Operations and Administration to enable the Water District to achieve its mission and its ends policies. Such efforts are an important component of the water utility operations, including water conservation and resource protection programs, as they help ensure safe and reliable future supplies. Specifically, OPA's Government Relations unit performs anticipatory issues management, monitors emerging policy trends; ensures access to key decision makers; provides support to effect policy change related to the District's mission; cultivates relationship building and advocacy opportunities and serves as the internal and external connection for legislation, regulatory action and funding opportunities which affect the District. Its Community Relations unit performs integrated marketing and distribution of the District's key messages, including developing and managing the District's visual identity; serves as principal liaison to the news media; and develops effective general and ethnic outreach to inform the public, shape public opinion and mobilize support for District activities.

WATER SUPPLY AUGMENTATION

To maintain sufficient water supplies to support economic growth and maintain the quality of life in our community, the District aims to ensure adequate water supplies in both the short- and

long-term. Obtaining adequate supplies for the future has two aspects: maintaining the reliability of existing supplies through both wet and dry years and developing access to additional supplies to meet future needs.

Ensuring the availability of 300,000 AF annually to 15 cities spread over 1,300 square miles requires operation of the following facilities:

- 10 surface reservoirs with a capacity of 169,000 AF
- 17 miles of canals
- 393 acres of recharge ponds
- 76 miles of controlled in-stream recharge in the County
- 142 miles of pipelines
- Three water treatment plants
- Three pump stations

To manage the County's water storage reservoirs, both surface and underground, the District operates and maintains a countywide conservation and distribution system (see Water Conveyance, Treatment, and Distribution map, Appendix C). The system conserves local runoff for either recharge into the groundwater basin or treatment at one of the District's three water treatment plants. The District also operates several local pipelines to transport imported raw water and locally-conserved water to various locations within the system for treatment and distribution or for groundwater recharge.

The District has long-term agreements to purchase water to augment local water supplies through the CVP and SWP facilities. In addition, the District supports the development of recycled water and promotes water conservation in homes, business, and agriculture. A significant effort is also dedicated to preparing long-range water supply plans, including planning for droughts. The principal activities of the District in augmenting water supplies are described below.

Managing Groundwater Recharge

The District operates ten reservoirs that conserve water for later recharge into the groundwater subbasins. The three interconnected subbasins (see Groundwater Subbasins and Major Recharge Systems map, Appendix C) provide essential supplies during dry periods. They have a maximum operational capacity of approximately 525,000 AF and normally provide one-half of the County's annual water supply for potable use. Groundwater storage is replenished using more than 30 recharge facilities in six major recharge systems within these three subbasins. In addition to local water, these facilities also percolate imported water into the aquifer. The annual average recharge capacity of these systems is 157,200 AF.

Although groundwater subbasins are also replenished by water that percolates through the beds of unmanaged streams, without the District's recharge facilities the majority of the natural stream runoff would flow out to the Bay.

The Santa Clara Valley subbasin underlies the northerly portion of the District and includes the majority of the streams and recharge facilities operated by the District. In 2002, the District replenished this subbasin with approximately 71,700 AF of locally-conserved and imported water. The Coyote and Llagas subbasins in the

southerly portion of the District were replenished with approximately 35,300 AF of locally-conserved and imported water.

Surface Water Transportation and Storage

Water supply reliability includes both the availability of the water itself as well as the reliability and integrity of the infrastructure and systems that transport and store it. Thus, all activities related to operating and maintaining the District's dams, reservoirs, canals, and pipelines are directly related to providing water supply.

District facilities are subject to regulation regarding seismic performance of dams, reservoir landslide monitoring and evaluation, and periodic field inspections. Consequently, maintenance activities include continuing liaison and data exchange with the State Division of Safety of Dams and the Federal Energy Regulatory Commission with regard to the safety of District dams.

Imported Water

The SWP, CVP, and City and County of San Francisco's Hetch Hetchy Project provide approximately 60 percent of water supplies in average years to the County. Imported water is conveyed to the County through the South Bay Aqueduct, which carries water from the State Water Project; the federal San Felipe Division, which brings water from the CVP; and the Hetch Hetchy Aqueduct, which brings water from the Hetch Hetchy Reservoir in the Sierra Nevada Mountains.

Maintaining reliable access to high-quality supplies of imported water is essential to meeting current water needs and to implementing the District's IWRP strategy for future water supplies. Both Board and staff members devote considerable time in three areas related to securing reliable supplies of imported water: Resolution of Bay-Delta Issues through the CALFED process, Water Banking, and Managing CVP and SWP Contract Issues. Each of these is discussed below.

Resolution of Bay-Delta Issues: (CALFED Bay-Delta Program)

The District imports water through the San Francisco Bay/Sacramento-San Joaquin River Delta Estuary (Bay-Delta) under contracts with the SWP and the Federal CVP. The Bay-Delta is the largest estuary on the west coast and supports more than 750 species of plants and wildlife. The Bay-Delta also provides water supply to more than two-thirds of the population in the state and to agriculture in the Central Valley and the San Felipe Division. However, decades of competing demands have taken a toll on the Bay-Delta and today it no longer functions as a healthy ecosystem or as a reliable source of water. Regulatory actions to protect threatened or endangered fish have reduced the reliability of Bay-Delta water supplies. Water quality is degraded, making it difficult and expensive to meet drinking water standards. In addition, the vulnerability of delta levees to seismic and flooding failures threatens both the infrastructure and the quality of California's water supply.

The District plays an active role in resolving these Bay-Delta issues by participating in the state/federal/public CALFED process and other related processes. Since the signing of the Bay-Delta Accord in December 1994, a

coalition of state and federal agencies, known as the CALFED Bay-Delta Program, has been developing a plan for resolving Bay-Delta issues in cooperation with environmental, business, urban, and agricultural interests. In July 2000, CALFED released its Final Programmatic EIR/EIS (FPEIR/S). A Record of Decision (ROD) and Notice of Determination were adopted in August 2000.

The District is a leader in garnering broad support for the CALFED Bay-Delta Program. A successful Bay-Delta resolution is absolutely essential to address California's water problems and to maintain the public welfare and the economic viability of the state.

The CALFED Bay-Delta Program received a major boost in November 2002 with the passage of Proposition 50, a $3.44 billion water bond that will provide $825 million for the CALFED Program and $1.3 billion for related projects. This District was an early supporter of Proposition 50, and was also a leader in efforts to secure a long-term federal funding authorization for the CALFED Program. That effort last year resulted in the approval of a limited, one-year authorization for the Program. Efforts to secure a comprehensive authorization bill are continuing in 2003. Senators Feinstein and Boxer have introduced a bill in the Senate to authorize $880 million in federal funds for the CALFED Program. The District supports that legislation and has committed to work with the Senators as the bill moves through the legislative process. Efforts to introduce a CALFED bill in the House are under way.

The District also supports the CALFED Program through its payments to the CVPIA Restoration Fund and participation in the EWA. In FY 2002–03, the District contributed approximately $1.3 million toward restoration of the Bay-Delta ecosystem through payments to the CVPIA Restoration Fund. In 2001, the District sold DWR 30,000 AF of stored water from its account in the Semitropic Water Bank for EWA, and is continuing to negotiate other short-term agreements that may provide needed assets for a functional EWA.

Banking Available Supplies for Future Use

The District's IWRP identified banking of excess supplies in wet years as a central element in the preferred strategy for providing supplies needed in future dry years.

In May 1996, the Board took the first step in implementing the banking strategy when it approved an agreement with Semitropic Water Storage District to store 45,000 AF of State Water Project water. In 1997, the Board approved a long-term agreement with Semitropic. Under the terms of this agreement, the District has banked water in years 1997 through 2002. In 2001, the District sold 30,000 AF of its banked water to the State of California in support of the CALFED EWA. The EWA payments of approximately $8 million were based on the District's cost to store and retrieve water from the Bank. After accounting for this sale and system losses in Semitropic Water Storage District, the District now has over 114,000 AF in storage (See Table 2-3). The total capacity available to the District until January 1, 2006, is 350,000 AF. By that date, the District must decide its permanent level of investment in Semitropic, and make any capital

payment necessary to reach that level. The District's current level of banking activity would result in an investment level of approximately 200,000 AF by January 1, 2006. To maintain the currently reserved capacity of 350,000 AF, the District would have to make an additional capital payment of approximately $25 million.

Managing Central Valley Project and State Water Project Contract Issues

The District's agreement with the Bureau of Reclamation provides for eventual payment of the major share of the Bureau's costs for constructing the San Felipe Division of the CVP. Under the 1977 contract, the District initially paid a reduced rate for its water deliveries, in recognition of the District's need to expand its local infrastructure to accept CVP water. Because San Felipe construction costs were much higher than anticipated, the contractually specified rates paid by the District have been too low to fully pay the District's annual share of the San Felipe Division costs. The cumulative shortfall is being tracked by the Bureau; however, the District is contesting the Bureau's accounting for project costs and the District's share of costs. Since 1998, the District and other CVP contractors have been negotiating with the Bureau to settle these complex financial issues. Some progress has been made, and discussions are continuing. The District has set aside over $50 million to pay its share of costs and hopes to resolve the problem and renegotiate its contract for CVP supplies over the next few years. Under either a renegotiated contract or the District's existing CVP contract, CVP water purchase costs are expected to more than double by 2007.

The District's contract with DWR for supplies from the SWP is also being amended to address a wide range of water supply and financial issues (the "Monterey Amendment"). While some provisions of the amendment reduce the reliability of the District's SWP supplies, these are offset by others that allow more efficient, cost-effective management of SWP water through transfers and banking. A settlement over litigation regarding the Monterey Amendment was approved by Sacramento Superior Court on May 20, 2003.

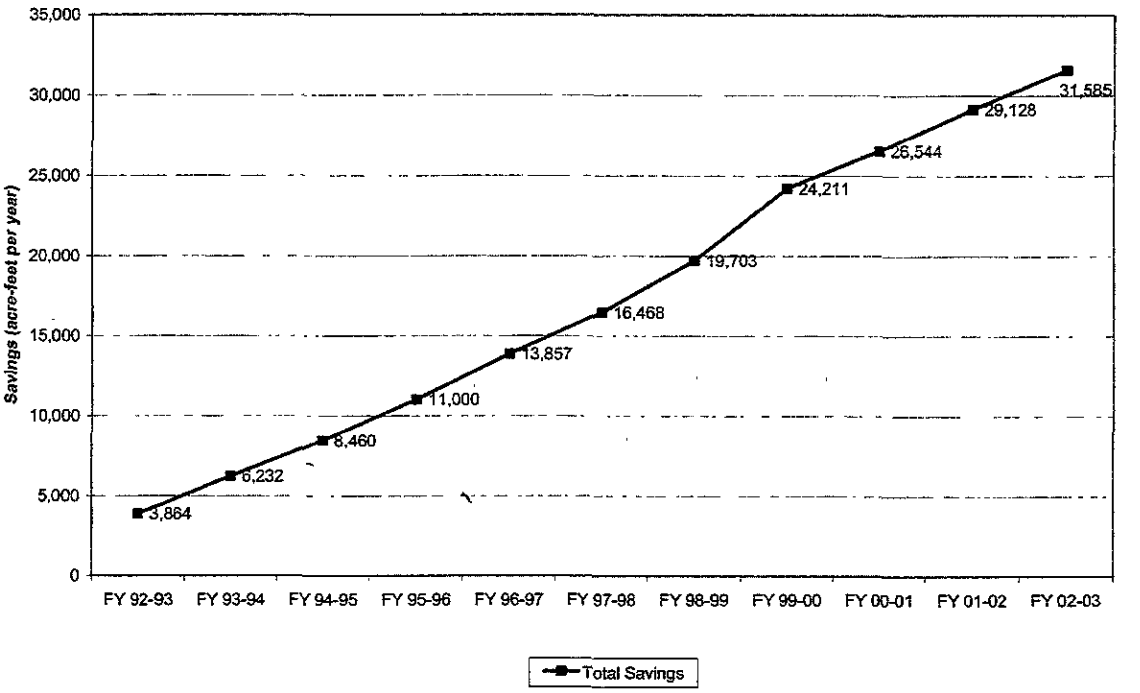
Water Use Efficiency: Water Conservation

The District's Water Conservation Program is essential to improving water supply reliability because water savings reduce current and future water demand. State and federally mandated conservation programs include implementing a set of BMPs contained in the California Urban Water Conservation Council's Memorandum of Understanding regarding Urban Water Conservation, adopted by our Board in 1991. The CVPIA also requires implementation of these BMPs. Key program elements include ultra-low-flush toilet (ULFT) rebates and retrofits, water-efficient washing machine rebates, low-flow showerhead and faucet aerator distribution, promoting water efficient landscaping, and implementing commercial/industrial/institutional and agricultural water management programs. The Water Conservation Program's goal, as identified in our IWRP, is to reduce yearly baseline water demands by a total of 74,000 AF (46,000 through active savings and 28,000 through passive savings) by the year 2020. To date, the District has reduced the yearly baseline water demand by 31,500 AF (10,200 through active savings and 21,300 through passive savings). Active water conservation is defined as reduced demands that are directly attributable to District programs. Passive water conservation is defined as reduced demands that are attributable to

water-efficiency standards and ordinances. Figure 3-1, shown below illustrates the progress that the District is making to reach this goal.

FIGURE 3-1
Cumulative Water Savings From Conservation Programs

(Acre-Feet / Year)



Between 1990 and May 2003, the District has accomplished the following:

- Ultra-low-flush toilets for residents installed: 243,144
- Ultra-low flush toilets for businesses installed: 8,903
- Water efficient washing machine rebates issued (for residents): 34,743
- Water efficient washing machine rebates issued (for businesses): 1,611
- Low-flow showerheads distributed: 118,091
- Faucet aerators distributed: 71,057
- Large turf audits completed (Irrigation Technical Assistance Program): 522 sites signed up for program - 485 meet the potential savings criteria and received an audit.
- Water-Wise House Calls (Residential Surveys) completed: 15,975 single-family and multi-family units

- Financial incentives paid to businesses for making water efficiency improvements: 53 sites received $502,210 in financial incentives, resulting in 1,234 acre feet per year in savings.

- Mobile Lab on Farm-Irrigation Management

Of the aforementioned accomplishments, residential and business ULFTs contributed to over 55 percent of the annual water savings. Faucet aerators and showerheads respectively contributed 15 percent and 10 percent of the savings. Water efficient washing machines reduced the annual water demand by 1.7 percent. Other programs, such as the large turf audits, Water Wise House calls and business improvements (excluding the ULFTs) collectively reflect 18 percent of the annual water savings.

The District is in the sixth year of a Mobile Lab Program, which provides County farmers with on-site irrigation system evaluations and recommendations for efficiency improvements. The District's Agricultural Water Use Efficiency and Nitrate Management Programs continue to work closely together and offer financial incentives to encourage more efficient water use and nitrate (fertilizer) management. These programs match fertilizer use and irrigation to crop needs. To date, 117 sites — representing 46 growers, have received the Mobile Lab field tests with 425 acre-feet of potential water savings identified in 2002.

The programs have recently been consolidated, and some changes in eligibility have been made. The first is the addition of an irrigation system evaluation requirement in order to link the discount more closely to the District's goal of water use efficiency. The second is limiting the duration of qualification to three years, after which the grower would have to obtain a new irrigation system evaluation to maintain eligibility for the discount. The three year time limit is suggested because over time, the efficiency of an irrigation system will degrade in the absence of a maintenance program.

The INAAP and Mobile Lab programs were integrated in May 2003. Discount incentives are now available for INAAPP participation, in addition to those available for mobile lab participation. INAAP qualification duration lasts five years. During this period, an agronomist works with participating growers on irrigation and plant nutrition issues.

Several Commercial/Industrial conservation programs began in FY 2002–03, while programs from previous years continued. The District, along with several other agencies, is offering the installation of 1,000 water efficient pre-rinse spray nozzles, at no cost, to restaurants within Santa Clara County. Furthermore, a commercial/industrial/institutional water use survey program will soon be underway to provide businesses with site-specific water use assessments and cost-effective conservation project recommendations. This new survey program is being provided by funding awarded to the District by the California DWR.

On-going commercial/industrial programs include offering rebates on high-efficiency commercial clothes washers and a ULFT program to provide installations in restaurants and food stores, gas stations, and wholesale/retail stores. The District also co-funds Project WET (Water Efficient Technologies), along with the City of San Jose, which offers rebates to commercial and industrial water customers for the implementation of process and equipment changes that reduce water needs and wastewater discharges.

A new program, which began in late FY 2001–02, is a water budget program for large landscape sites and land area for different crops. The District, utilizing multi-spectral images and different classification methods has calculated the square footage of irrigated landscape for approximately 50,000 irrigation-only and mixed-use commercial accounts that are distributed over a 900 square-mile area. We are now in the process of inputting this data into a web-based database which will then calculate a site specific water-use budget. The database (which will be accessible to property owners, managers, landscapers, and water agencies) will include both a table and graph comparing a recommended amount versus what the site is actually using. The District has been awarded $406,000 in CALFED grant funding from the California DWR to help fund this project.

The Water Use Efficiency has been working in FY 2002–03 to launch several new water conservation programs:

- The District is coordinating with Garden Soft Software to develop the residential water-wise gardening program. The program will provide residents of Santa Clara County with residential landscape self audit information as well as a plant database specifically designed to be unique to the District's service area.
- The Evapotranspiration (ET) Controller Pilot Program for both residential and commercial properties will be underway by the end of FY 2002–03. The target participants will be the top 20% of residential water consumers and will be used to determine the amount of outdoor water savings that can occur with the use of ET Controller technology. The program began in June 2003.
- The District is also undertaking a Water Wise Demonstration Garden Project. Currently in the design phase, the goal of the demonstration garden is to develop a unique, one-of-a-kind, demonstration garden that promotes water use efficiency in landscaping. The garden will be an educational resource, test facility, and learning center providing environmentally sound and cost-effective landscaping alternatives. The primary purpose of the garden is to educate the general public on the use of water wise plants while promoting efficient irrigation technologies and recycled water.

Water Use Efficiency: Water Recycling Partnerships and Assistance

Projects

The Water District is participating in the planning, design and construction of recycled water facilities in Silicon Valley. Among these are:

- Together with the City of San Jose, it is funding construction of the Silver Creek pipeline, which will begin providing three million gallons of recycled water a day from the San Jose/Santa Clara WWTP to the Metcalf Energy Center in 2004 and potentially to other customers along this pipeline alignment.
- The District and the South County recycled Water Authority is also developing a Recycled Water Master Plan and other system improvement in the South County

recycled water system.

- The District is helping the cities in production and expansion of recycled water within the County through rebate and cost-sharing programs.
- Beginning in 2003, the District with East Bay Municipal and Utility District, Contra Costa Water District and San Francisco Public Utility Commission is jointly undertaking a project to analyze the feasibility of a regional desalination facility.

Studies

The Santa Clara Valley Water District is conducting studies and research investigating the potential and implications of recycled water usage. Among these are:

- **Advanced Recycled Water Treatment Feasibility** – This study is to identify potential new uses and to determine which treatment level allows the most flexibility and makes the most economic sense. For example, irrigation of sport fields may require less treatment than agricultural irrigation and potable uses like groundwater recharge. The study will also examine the need for advance treatments, such as reverse osmosis and microfiltration, to improve the quality of recycled water and minimize any impact it might have on groundwater quality.
- **Impact of Recycled Water on Soils and Groundwater** - A study on geochemical reactions between recycled water and soil minerals will look for impacts of recycled water on soils in the county. A subsequent study on salt loading on groundwater quality will include a comprehensive salt balance to evaluate the relative impact of salt contribution from expanded recycled water use on local groundwater supplies.
- **Groundwater Monitoring** - In conjunction with the work above, the Water District is developing a groundwater monitoring network to detect any changes in groundwater quality.
- **Water Softener Pilot Project** – The study is designed to assess the types of outreach programs and incentive offers that are necessary to persuade customers to use more efficient water-softening technology, to reduce the amount of salt these systems add to recycled water.
- **Characterizing Salinity Contributions in Sewer Collection and Reclaimed Water Distribution Systems to Develop Salinity Management Strategies** - The study will identify sources of salinity in sewer collection systems and develop management strategies to control salinity levels of recycled water.
- The District, as a subcontractor to MWD has secured EPA funds that will account for 50% of the total project costs to study innovative uses of recycled water at a chip manufacturing facility that could be a showcase project for other industrial water users.
- The District, as a subcontractor to MWD has secured DWR funds that will account for 50% of the total project costs to study use of advanced treated tertiary recycled water for stream flow augmentation.
- The District, as a subcontractor to MWD has secured DWR funds that will account for 50% of the total project costs to study the feasibility of brackish groundwater treatment for future reuse.
- The District, as a subcontractor to MWD has secured California Energy Commission Funds ($50,000) and is currently performing a joining study with the City of San Jose to analyze Electro-dialysis Reversal/Reverse Osmosis Pilot work in recycled water treatment. The City also obtained grant funds for this project for the WateReuse Association and US Bureau of Reclamation.

WATER QUALITY PROTECTION

In addition to augmenting water supply, the District is responsible for protecting surface and groundwater resources for use in the County. Water quality programs include: (1) treating local and imported surface water for sale to retailers, (2) protecting surface and groundwater resources from contamination, and (3) participating in a CALFED-sponsored Bay Area Regional Blending/Exchange Study to investigate opportunities for water quality improvements through partnership in regional facilities or exchanges. Water treatment is necessary to ensure that the water the District provides meets or exceeds all federal and state drinking water standards. Resource quality protection has numerous aspects that are discussed below.

Treated Water Operations

The District owns and operates three water treatment plants: Santa Teresa Water Treatment Plant (STWTP), Rinconada Water Treatment Plant (RWTP), and Penitencia Water Treatment Plant (PWTP), which provide high-quality treated water to the residences and businesses in Santa Clara County.

Reflecting its commitment to provide the highest quality water possible, the District was among the first water utilities nationwide to join the Partnership for Safe Water in 1995 (Partnership). The Partnership is a voluntary program developed cooperatively by the United States EPA, the American Water Works Association, the Association of State Drinking Water Administrators, and several other national drinking water industry organizations. The purpose of the program is to further reduce the potential risks to consumers from microbial contaminants such as cryptosporidium and giardia. The District has consistently surpassed the Partnership's goal for filtered water turbidity, a critical indicator of plant performance.

Capital Improvements at the Water Treatment Plants

The District has completed the first stage of planned improvements to the treatment processes at each of its three treatment plants, in response to two relatively new federal Safe Drinking Water Act (SDWA) amendments: the Interim Enhanced Surface Water Treatment Rule and the Disinfectant/Disinfection By-Product Rule, announced in December 1998. The official compliance date for these amendments was December 2001. The new water treatment processes provide the tool to reduce the by-products that occur when surface waters containing organic materials are disinfected with chlorine.

Stage 2 of the process upgrades will further reduce the levels of disinfection by-products *and potential for microbial contaminants in treated water and to further improve water* quality. This will include switching to ozonation as the primary disinfection method instead of chlorination and installing filter washwater clarification facilities. The Stage 2 work also includes structural modifications to improve treatment plant reliability during seismic events and process additions to increase treatment capacity at Rinconada to meet projected future demands. Construction of the $218 million capital improvement project began at Santa Teresa and Penitencia in Fall 2002. Construction at Rinconada is scheduled to begin in Fall 2004, with construction completion in 2008.

To complement these new treatment efforts, the District also is planning a new Water Quality Laboratory. The facility will replace the 30-year old Rinconada Laboratory and will more reliably and cost-effectively monitor the quality of our water supplies. Construction is scheduled to begin in December 2003 and is projected to be completed in December 2004.

Resource Protection

Preserving the quality of water supplies is more cost-effective than treating contaminated or degraded water. Pursuant to the District's mission to provide high-quality water to the County, the District continually addresses water quality problems that threaten the delivery of safe, reliable, high-quality water. This is to ensure that water delivered to the District's retailers meets or exceeds all state and federal drinking water regulations. The District also responds to unforeseen water quality issues and acts to ensure the continued ability to deliver high-quality water.

The following subsections describe the District's activities to protect groundwater and surface water that are included in programs such as Water Quality and Reservoir Watershed Management, Groundwater Quality Management, Well Ordinance Program, the Underground Storage Tank Program, and Water Quality Special Studies. All these are directed at protecting the quality of the County's sources of water.

Methyl Tert-Butyl Ether (MTBE)

A continuing threat to the drinking water supply is the gasoline additive called MTBE, a colorless chemical compound added to reformulated gasoline that was developed to reduce smog and meet the goals of the Clean Air Act (CAA). Since November 1996, the District, in partnership with the County's water retailers, has engaged in an aggressive monitoring program to track the occurrence of MTBE in the County's water supplies. In November 1997, the District confirmed the presence of small amounts of the chemical in water entering and leaving one of its three treatment plants. Traces of the additive have been found in two public water supply wells; these wells were removed from service. Currently, MTBE is non-detectable in the local public water supply.

The District is actively pursuing long-term solutions to this potential problem through a two-pronged approach. A high level of effort is being expended to prevent more of the contaminant from entering public water supplies. In addition, we have expanded our legislative and outreach efforts (through our Office of Public Affairs) to restrict the use of MTBE as a gasoline additive. In late March 1999, the Governor of California ordered a phase-out of the additive in California gasoline by the end of 2002, but subsequently extended the date to December 2003.

Monitoring will continue at our reservoirs, treatment plants, and in all of the District's groundwater subbasins. The District completed a focused groundwater MTBE monitoring study in December 2000. No reportable concentrations of MTBE were detected in any of the approximately 100 wells in the study. The District continues to monitor groundwater for MTBE on an annual basis.

A District pilot study to determine if MTBE releases are occurring at sites that

comply with new standards for underground storage tanks found MTBE in groundwater at 13 of 28 sites. In addition, the District completed a detailed study of 16 leaking underground storage tank sites to determine if undetected releases are occurring and identify potential weaknesses in fuel storage, management, and delivery operations. Based upon these studies, the District requested the Regional Water Quality Control Boards (RWQCBs) to require soil and/or groundwater sampling at all operating stations in the County. The Central Coast Regional Board responded by requiring post-closure groundwater monitoring at facilities close to water supply wells. The San Francisco Bay Regional Board responded by requesting groundwater sampling at approximately 49 operating stations. The results show MTBE at 60 percent of the sampled stations. At the District's request, the San Francisco Bay Regional Board is expanding the program to require groundwater sampling at all operating gasoline stations in high risk areas of the groundwater basin, including the recharge areas and near drinking water supply wells.

The District works cooperatively with Santa Clara County Parks and Recreation (County Parks) to protect local water supplies from MTBE. County Parks manages the number of gasoline-powered watercraft allowed on the three District reservoirs that allow such boating. In May 2000, County Parks also began requiring the use of gasoline produced without MTBE in all watercraft on District-owned reservoirs. The goal of the program is to ensure that MTBE concentrations in the reservoirs are nondetectable. MTBE has only been detected on two occasions, both times at the detection limit, following the 2000 boating season.

Nitrate Management

A different threat to groundwater supplies is nitrate contamination. High nitrate concentrations in drinking water can cause health problems in infants less than six months of age. Nitrate contamination is a particular concern in the southern portion of the County, but increased concentrations of nitrate have also been reported in parts of the North County. The District has identified the main sources of nitrate in the South County area as fertilizer applications, septic systems, and animal enclosures. The District has designed a Nitrate Management Program to monitor nitrate occurrence, reduce nitrate exposure, and reduce nitrate loading throughout Santa Clara County.

To monitor nitrate occurrence, the District has established a network of more than 60 wells throughout the South County study area to assess long-term trends. The District also analyzes the nitrate levels reported by public water suppliers throughout the County to supplement the data collected by the District. The District is completing a detailed analysis of the North County nitrate data to determine if there are regional concentration trends that might be of concern. The data indicates that, since the mid-1980's, nitrate concentrations appear to be declining in the Santa Clara Valley subbasin.

To reduce exposure to nitrate, the District offers a free nitrate analysis to all private water supply well users. Since 1998, more than 600 tests have been conducted. More than half the wells tested have exceeded the maximum contaminant level of 45 milligrams per liter of nitrate. Test recipients are given a

copy of the results along with a fact sheet detailing what nitrate is, where it comes from, what the health risks are, how to remove nitrate using point of use treatment systems and how to prevent further contamination.

To reduce nitrate loading, the District has launched a public education program in conjunction with the University of California Cooperative Extension, Department of Agriculture, Farm Bureau and Natural Resource Conservation Service.

In Spring 2002, a series of workshops were conducted to provide property owners with the tools they need to evaluate how their properties are affecting local natural resources, especially water resources. The workshop series was repeated in the Fall 2002 and will be repeated annually in the fall.

The District will continue working with the Santa Clara County Department of Environmental Health (County Health) to communicate information to owners on septic systems operation and maintenance. The District and County Health prepared a Well Owner's Guide that was mailed to more than 3,000 well owners in the county. Staff participated in the stakeholder group for preparing statewide regulations for groundwater protection from onsite wastewater treatment systems.

The District provides free infield technical assistance on nutrient and irrigation management to growers through the In-field Nutrient Assessment Assistance Program (INAAP). To increase participation in the program, beginning in FY 2003-04, the District offers a $2.00 per AF discount to eligible growers who participate. This program directly addresses water and fertilizer user efficiency, their inter-relationships, and groundwater protection. In three of the ranches that participated in the program in 2002, fertilizer applications were reduced by 60 to 100 pounds per acre.

Perchlorate

Perchlorate is a chemical used in the manufacturing of rocket fuel, road flares, and fireworks. A drinking water standard for perchlorate has not yet been developed, but perchlorate can affect thyroid function and development in fetuses and children. The Water District initiated a free private well water testing program for residents in the San Martin area in January 2003. The testing program responds to public concerns of water quality following the detection of perchlorate in a seven-mile long area of the Llagas groundwater subbasin. The District collected 1,160 samples between January and June of 2003. Perchlorate was detected in more than one-third of the samples. The water district is also providing bottled water to more than 1,500 households in the affected area.

Staff is continuing to support the central Coast Regional Water Control Board's regulatory effort by providing groundwater data and information, technical assistance on investigation and cleanup oversight efforts, and logistical and technical support for public meetings.

The District is continuing to evaluate alternatives for a clean, reliable water supply throughout the south county area. A preliminary analysis of alternatives was presented at a public meeting on May 3, 2003. The community's input, as

well as input from other stakeholders, is being solicited. Staff's intention is to refine the alternatives, based on stakeholder input, into a specific action plan.

Groundwater Guardian

The District has been designated as a Groundwater Guardian by the Groundwater Foundation based on our groundwater protection efforts. The Groundwater Foundation is a nationally recognized, private, non-profit, educational organization dedicated to protecting groundwater resources from contamination and over-drafting. As a Groundwater Guardian, we plan to develop and support community outreach and protection efforts, educational materials and provide technical assistance for groundwater protection activities.

Underground Storage Tank Fuel Cleanup Program

The District's Groundwater Cleanup Oversight Programs Unit is responsible for the Leaking Underground Storage Tank Oversight Program (LUSTOP) to oversee the investigation, cleanup, and closure of cases where soil and/or groundwater have been affected by petroleum fuel and additives such as MTBE from leaking underground storage tanks (USTs).

More than 2,376 fuel leak cases have been reported in the County, and over 75 percent of these cases have received regulatory closure by the District or other regulatory agencies. To date, 1,731 sites in North County and 80 sites in South County have been closed. The District is currently overseeing 466 sites in North County and 470 sites in South County. The remaining 71 open sites are overseen by the RWQCBs.

The majority of the active cases are associated with releases of gasoline. MTBE has been detected in groundwater at more than 370 of the active gasoline tank sites. Some of the active cases are associated with water supply well impacts at very low concentrations, including: at least one large public water supply well, one well that supplies a local school district, and several private wells. The District prioritizes fuel leak cases that pose the greatest risk to the groundwater basin and ensures that immediate action is taken to address the sites which have the greatest potential for contamination of the water wells and vulnerable portions of the groundwater basin.

In accordance with a District request, the RWQCBs require environmental monitoring at operating gasoline UST facilities that pose the greatest threat to groundwater resources. Over 200 facilities have been requested to conduct investigations of MtBE presence in groundwater. This work is ongoing.

Solvents and Toxics Liaison Program

The District's Groundwater Cleanup Oversight Programs Unit provides peer review and regulatory liaison on solvents, toxics, perchlorate, and other contamination cases that threaten groundwater quality. Activities that use chlorinated solvents and recalcitrant toxic chemicals can pose a significant threat to the groundwater basin and many of these activities have resulted in releases to soil and groundwater. The large number of electronics manufacturing plants,

together with heavy industry and military facilities in Santa Clara County, has resulted in over 600 solvents and toxics releases that have affected the groundwater. The District provides peer review and tracks the progress of these sites to ensure that water resources are protected.

The District is also performing an evaluation of the effects of releases of perchloroethelyne (PCE) from dry cleaners and other facilities that use PCE and has identified more than 600 former locations of dry cleaning operations. District staff will be requesting the Regional Boards to ensure that possible PCE contamination associated with these operations are investigated.

In late 2002, perchlorate emerged as a significant contaminant in our groundwater basins. The Olin Case in Morgan Hill has now affected over 400 water supply wells in the unincorporated area of Santa Clara County known as San Martin. The Central Coast RWQCB is providing regulatory oversight of the Olin Case and is directing the investigation and cleanup for perchlorate contamination in the San Martin area. Groundwater is currently the only source of drinking water in this area and over 1,800 families were provided with bottled water. Significant concerns remain regarding this community's exposure to perchlorate in their drinking water and perchlorate accumulation in agricultural crops and livestock. The District is providing detailed technical and logistical support to the community and the Regional Board. (See also Perchlorate under "Resource Protection")

Well Ordinance Program

The District protects the quality and quantity of the County's groundwater resources by ensuring that all wells in the County are constructed, maintained, modified, and destroyed in compliance with the District Well Ordinance and the State Well Standards.

The Well Ordinance program includes permitting, tracking, inspecting, and violation enforcement of all wells in the County. The program also assists the public in destroying abandoned wells and maintains District-owned wells. During the first ten months of FY 2002–03, the District:

- Permitted 1,621 wells and other deep excavations for construction or destruction
- Inspected 1,445 wells and other deep excavations constructed or destroyed
- Registered 837 wells
- Provided drilling services to the owners of one abandoned well

HAZMAT Emergency Response Program

To prevent or limit contamination of the County's water supply from hazardous material (HAZMAT) releases, the District Incident Response staff can manage

investigations, conduct sampling and analysis, direct clean up, and disposal of suspected or known hazardous materials dumped or spilled in the vicinity of reservoirs, recharge ponds, rivers, creeks and other District jurisdiction interests.

Urban Runoff Program

The District Program has a team dedicated to training of staff and conducting outreach efforts to facilitate the improvement of the quality of storm water runoff in the County. The District is a member of the SCVURPPP. The programs provide training, outreach and monitoring to ensure the improvement of the quality of storm water that flows into streams of the Santa Clara Valley and the San Francisco Bay. The District participates in the SCVURPPP program as 1 of 15 co-permittees under a single Municipal Storm Water Permit from the San Francisco Bay RWQCB. Additionally, the District, under its Clean, Safe Creeks Plan is extending these storm water pollution prevention efforts into south Santa Clara County. Combining efforts with other local agencies for this permit has greatly improved the performance and efficiency of the Urban Runoff Program.

CAPITAL IMPROVEMENTS

Project management and engineering services for planning, design and construction of the District's capital projects are provided by the Capital Program Services Division. The Division is also responsible for the development, management, monitoring and tracking of the District's Capital Improvement Plan (CIP). This plan is intended to identify and plan for the District's 15-year capital improvement spending, the sources to fund the long term plan, and the staffing level to execute the long-term plan.

Some major water utility capital improvement projects currently in progress include South County Recycled Water Improvements, Almaden Dam Outlet Works, Lenihan Dam Outlet Modification, Treated Water Improvement Stage 2, and New Water Quality Laboratory. The objectives of these projects are as follows:

- *The South County Recycled Water Improvements Project will help to achieve the* Board's policy of expanding recycled water usage in Santa Clara County. The District has constructed a booster pump at Christmas Hill Park and a reservoir at Eagle Ridge Golf Course. An extension to Gilroy Sports Park and rehabilitation of an existing eight-mile long recycled water pipeline in Gilroy is underway. The estimated total project cost is $11.5 million.

- The Almaden Dam Outlet Works Project will investigate and restore the structural integrity of the existing intake tower, outlet pipe and energy dissipater structures to preserve the operating functions of Almaden Dam and comply with California Division of Safety of Dams (DSOD) regulatory requirements. The project is in planning phase and is currently scheduled to be advertised for construction in June 2005, but may be delayed due to environmental impact constraints. The estimated total project cost is $7.6 million.

- The Lenihan Dam Outlet Modification Project will develop and implement a solution to the outlet pipe collapse problems so the reservoir can safely impound water to any reservoir elevation. The project is currently in planning phase and is scheduled to be

advertised for construction in the summer of 2005. The estimated total project cost is $21.5 million.

- The Treated Water Improvement Project Stage 2 provides planning, design and construction of improvements at PWTP, STWTP, and RWTP. The improvements ensure District's treated water quality meet or exceed all applicable regulations, and improve the reliability of the three treatment plants. The Penitencia and Santa Teresa plants are currently under construction, and Rinconada plant is scheduled to start construction in the summer of 2004. The estimated total project cost is $200 million.

- The New Water Quality Laboratory Project will plan, design, and construct a laboratory that is in compliance with EPA guidelines and other applicable standards, and meets the projected needs of the District for a 10-year horizon. The project is currently in design phase and is scheduled to be advertised for construction in the summer of 2003. The estimated total project cost is $13.4 million.

In FY 2003–04, approximately twenty new water utility projects were added to the CIP. Some major new projects are Flashboard Dams Improvement, Pacheco Pumping Plant Adjustable Speed Drive Replacement, Central Pipeline Rehabilitation, Treated Water System DHS Compliance Project and Security Improvement.

Development of the Asset Management Program Plan was started in January 2002 to provide a better basis for identifying long-term capital rehabilitation and replacement needs. This program's goal is to lower the cost of asset ownership and improve system reliability by establishing a life-cycle preventative and corrective maintenance schedule for each of the District's assets. The plan that will be generated from this effort will identify projects similar in nature to the Almaden Dam Outlet, Lenihan Dam Outlet Modifications, Almaden Calero Canal, and Rinconada Reservoir Roof Rehabilitation. The initial program plan is estimated to be complete by September 2003.

Table 3-1 shows the funding for capital projects for FY 2002–03 and planned funding for the next five fiscal years. The cumulative investment between FY 2003–04 and FY 2007–08 is projected to be approximately $267 million (constant 2003 dollars).

TABLE 3-1
Capital Improvement Projects —Fiscal Years 2002–03 Through 2007–08

(Thousands of Constant 2003 Dollars)

	02/03 Adjusted Budget	03/04 Adopted Budget	04/05 Adopted Budget	05/06 Projection	06/07 Projection	07/08 Projection
SOURCE OF SUPPLY						
So County Recycled Water Impro	174	-	-	-	-	-
Recycle Wtr Connect-SC Conduit	183	-	-	-	-	-
Recycle Wtr PL Rehab Cord/SCRW	64	85	-	-	-	-
San Tomas Wellfield	5,500	609	64	-	-	-
Water Facilities Sign Project	107	-	-	-	-	-
Silver Creek Pipeline	355	7,375	40	-	-	-
San Luis Reservoir Lowpoint	3,506	3,400	2,903	-	-	-
Santa Clara Tunnel Landslide	2,218	383	76	-	-	-
Almaden Dam Outlet[1]	944	-	4,525	341	-	-
Jacques Gulch Restoration	-	178	936	85	85	85
Fellow's Dike Rehabilitation	577	4,217	814	-	-	-
Lenihan Dam Outlet Mods	1,361	1,835	17,457	440	360	-
Assumed Asset Management	-	-	-	-	10,000	15,000
Infrastructure Master Plan	1,831	370	40	-	-	-
Water Banking (Capital)	-	1,462	2,100	2,896	4,955	4,326
Anderson Reservoir Bank Erosion	-	197	329	3,666	-	-
Flashboard Dam Improvement	-	780	5,166	1,014	565	-
Almaden Dam Instrumentation	-	110	252	1,674	1,109	1,305
Vasona Pump Station, Chemical Feed	-	73	32	-	-	-
Pacheco Pumping Plant ASD Replace	-	653	1,843	1,618	1,470	1,476
Dam Seepage	-	458	290	890	-	-
Advanced Recycled Water Treatment Facility	-	723	237	-	-	-
Geodetic Control Mainten Prog	-	238	16	-	-	-
Subtotal	**16,821**	**23,146**	**37,121**	**12,624**	**18,544**	**22,192**
RAW WATER TRANSMISSION AND DISTRIBUTION						
Central PL Protect at Route 87	18	-	-	-	-	-
Vasona Restroom Modification	107	216	-	-	-	-
Raw Water Control System	230	959	27	-	-	-
Coyote Canal Extension Abandonment	8	-	-	-	-	-
Kirk Ditch	-	974	72	-	-	-
Almaden Calero Canal	570	-	1,618	270	-	-
San Pedro Recharge Facility	117	13	39	-	155	313
Valve 906 Low Flow Bypass	-	-	-	-	106	20
Central Pipeline Rehab	-	102	497	2,332	-	-
Vasona Pumping Plant Electrical	-	197	436	-	-	-
Vasona Pumping Plant Long Term	-	-	-	-	279	157
Stream Flow Alert Upgrade Project	-	87	334	-	-	-
Subtotal	**1,049**	**2,547**	**3,022**	**2,602**	**540**	**490**
WATER TREATMENT						
PWTP Treated Water Improve Proj33	256	-	-	-	-	-
PWTP Treatment Improv Stage 1	242	-	-	-	-	-
PWTP Treatment Improv Stage 2	20,728	1,673	1,539	306	-	-
Various Penitencia Water Treatment Plant Projects	1,029	2,234	3,603	205	-	421
STWTP Treated Water Improv Proj33	256	-	-	-	-	-
STWTP Treatment Imrpov Stage 1	34	-	-	-	-	-
STWTP Treatment Improv Stage 2	36,180	1,746	1,682	767	265	-
Various Santa Teresa Water Treatment Plant Projects	806	1,367	391	-	338	-
RWTP Treated Water Improve Proj34	264	-	-	-	-	-
RWTP Treatment Improv Stage 1	65	-	-	-	-	-
RWTP Treatment Improv Stage 2	829	12,025	73,116	807	1,063	796
Various Rinconda Water Treatment Plant Projects	6,706	6,001	1,092	217	2,376	2,478
New Water Quality Laboratory	166	3,568	239	-	-	-
PWTP Backwash Pump	-	267	843	-	-	-
Telephones at Water Treatment Plants and Vasona	-	80	1,151	-	-	-
SCADA Software/PLC Upgrade, WT Plants	-	1,140	1,189	-	-	-
RWTP BL-1 Valve Vaults	-	-	-	-	200	800
Discharge Valves Actuator Replacement	-	-	-	-	88	-
RWTP Air Wash System & Backwash Valves	-	-	-	-	76	880
Visual Screening at Water Treatment Plants	-	143	777	-	-	-
RWTP Trunk Cable Upgrade Proj	-	184	-	-	-	-
Treatment Plant Filter Backwash Aid	-	-	-	173	200	580
Subtotal	**67,560**	**30,428**	**85,621**	**2,475**	**4,606**	**5,955**
TREATED WATER TRANSMISSION AND DISTRIBUTION						
Treated Wtr T&D Inst Upgrade	71	364	12	-	-	-
SCVWD SFWD Intertie	78	-	-	-	-	-
PWTP Del Main Modulating Valve	557	151	21	-	-	-
Rinconada Res Roof Rehab	813	2,630	163	-	-	-
Snell Pipeline Cathodic Prot	125	12	-	-	-	-
DHS Compliance, Treated Water System	-	310	1,302	3,152	601	-
Treated Water Distribution Flow Meter	-	179	350	-	-	-
Security Improvement	-	379	739	4,452	-	-
West Side Distribution System Study	-	-	-	-	-	300
Parallel East Pipeline Tie-in	-	-	-	-	-	167
Subtotal	**1,644**	**4,025**	**2,587**	**7,604**	**601**	**467**
TOTAL CAPITAL PROJECTS	**87,073**	**60,146**	**128,351**	**25,305**	**24,291**	**29,104**

[1] The amount for the Almaden Dam Outlet was slightly modified from the adopted budet in FY 04

IV. FINANCIAL OUTLOOK FOR THE WATER UTILITY ENTERPRISE

INTRODUCTION

The purpose of this section is to describe the short-term and long-term financial requirements for achieving the Board's Ends Policies and to present a funding approach. Section I reported the adopted rates for FY 2003–04. Section IV describes the multi-year financial analysis and the funding approach that serves as the foundation for the adopted rates in each zone. The proposed funding includes a series of increases in water rates in each zone for the next ten years, combined with additional debt financing. Appendix B describes the Water Utility revenue sources, cost centers, and reserves as well as Board policy regarding finances.

The Water Utility's revenue requirements remained relatively stable for the period from 1993 to 1998 and rates were held constant. In 1998, the utility made the first of a series of capital investments required to comply with new water quality regulations. Concurrently, the District faced higher costs for its water purchased from the Bureau of Reclamation. Consequently, the District embarked on a series of rate increases that saw the M&I groundwater rate in North County increase from $240 per AF in FY 1997–98 to $375 per AF in FY 2003–04.

The current outlook is for continued rate increases to cover steep increases in the cost of federal water, rising water treatment costs as a result of the conversion to ozone as a primary disinfectant, and rising debt service costs associated with capital investments. Section III, describes the continuing water utility programs and other issues that require additional funds for both capital and operating outlays. Projections of the capital and operating costs indicate that wholesale water rates will need to increase in the next several years, as the utility invests over $272 million (inflated dollars) in capital improvements from fiscal years 2003–04 to 2007–08.

The financial outlook does not include any estimates of the costs for implementing proposed solutions to the Bay-Delta water quality problems, conclusions drawn from the current IWRP study, further investments in water banking, possible construction of an advanced water treatment facility, perchlorate treatment, partnerships with San Francisco Public Utility Commission (SFPUC), or potential District investments in future recycled water facilities in the North County. As discussed in Section III, these and other items are in the planning stages and include a wide range of potential program costs and facility investments. The outlook also does not include any estimated revenue reductions due to potential state actions to address the budget deficit.

REVIEW OF DISTRICT'S FINANCES FOR FISCAL YEARS 2001–02, 2002–03, AND 2003–04

The District's financial plans are designed to carry out the direction of the Board's Ends Policies on water supply and quality. Some of the major increases in the FY 2003–04 projection reflect the higher cost to maintain or upgrade the District's aging facilities to enable better operations under increasingly stringent public health and environmental requirements.

Table 4-1 shows the revenue requirements that are the basis for the adopted rates, breaking out operations, water purchases, extraordinary items, and capital for fiscal years 2001–02 through 2003–04. The net requirements are the revenues that must be available from water sales, property taxes, and other sources after using debt financing and allowing for funds added to, or used from reserves. Reserves provide a balancing mechanism to smooth fluctuations in the

level of revenue that must be raised from water sales in a single year. Appendix B gives a description of each of the Water Utility Reserve Funds.

TABLE 4-1
Overview of Water Utility Revenue Requirements

($ Millions)

Revenue Requirements	Actual 2001–02	Budgeted 2002–03	Budgeted 2003–04
Operations	60.8	76.6	76.3
Debt Service	14.9	16.9	14.6
Water Purchases			
Federal Water	14.4	14.2	11.0
State Water	12.3	10.3	14.3
Extraordinary Items (Includes ISMP, Solar & CVP pymt)	3.4	3.4	2.5
Capital Projects	57.0	87.1	60.1
TOTAL REQUIREMENTS	**162.8**	**208.5**	**178.9**
Increase/Decrease in Reserves	(0.2)	(41.4)	34.0
Carryforward Capital Reserves	(31.2)		
Less Revenue Bond Proceeds/ Other Debt	-	45.0	75.0
Net Requirements From Water Utility Revenues	**131.4**	**122.1**	**137.9**

Fiscal Year 2001–02

During FY 2001–02, significant operating outlays totaling $12.0 million were made in the following continuing programs:

- $5.4 million for expanded efforts in Water Conservation Program
- $2.6 million for general Water Recycling
- $4.0 million for water banking

Table 4-1 shows that water purchases totaled $26.7 million and capital projects totaled $57.0 million FY 2001–02. Reserves decreased by approximately $0.2 million to pay for water utility outlay requirements.

Fiscal Year 2002–03

Budgeted operations requirements for FY 2002–03 show a $15.8 million increase over actual requirements for FY 2001–02. Planned expansion of specific programs contributes as follows: regional water reliability, $0.3 million; recycled water, $0.9 million; water utility security program, $1.6 million; asset management plan, $1.3 million, and Performance Efficiency and Accountability Program (PEAP), $1.9 million. Table 4-1 also includes extraordinary items of $1.8 million for the District's Information Systems Program (ISMP) payment and a $1.6 million inter-fund loan that will be used to pay for solar project costs. Capital appropriations for this fiscal year total $87.1 million, of which $57.7 million goes to further design and construction efforts at the water treatment

plants.

To fund the capital budget for FY 2002–03 over $86 million was met from debt and reserves.

Fiscal Year 2003–04

For FY 2003–04, the projected decrease of $0.3 million in requirements for operations is a result of the District Chief Executive Officer's guidance to cap this year's budget at 3% growth over the previous year's adopted budget. The cost of water purchased from the federal and state projects continues to be the largest expense item at $11.0million and $14.3 million, respectively, for this year.

In FY 2003–04, the budgeted capital appropriation is $60.1 million. The largest portion of this estimate is for construction of the Stage 2 improvements at the water treatment plants, Silver Creek Pipeline, Fellows Dike Rehabilitation, San Luis Reservoir Lowpoint and the new water quality laboratory. Design and construction of capital improvements mainly directed at enhancing the safety of drinking water delivered from the District's three water treatment plants are underway.

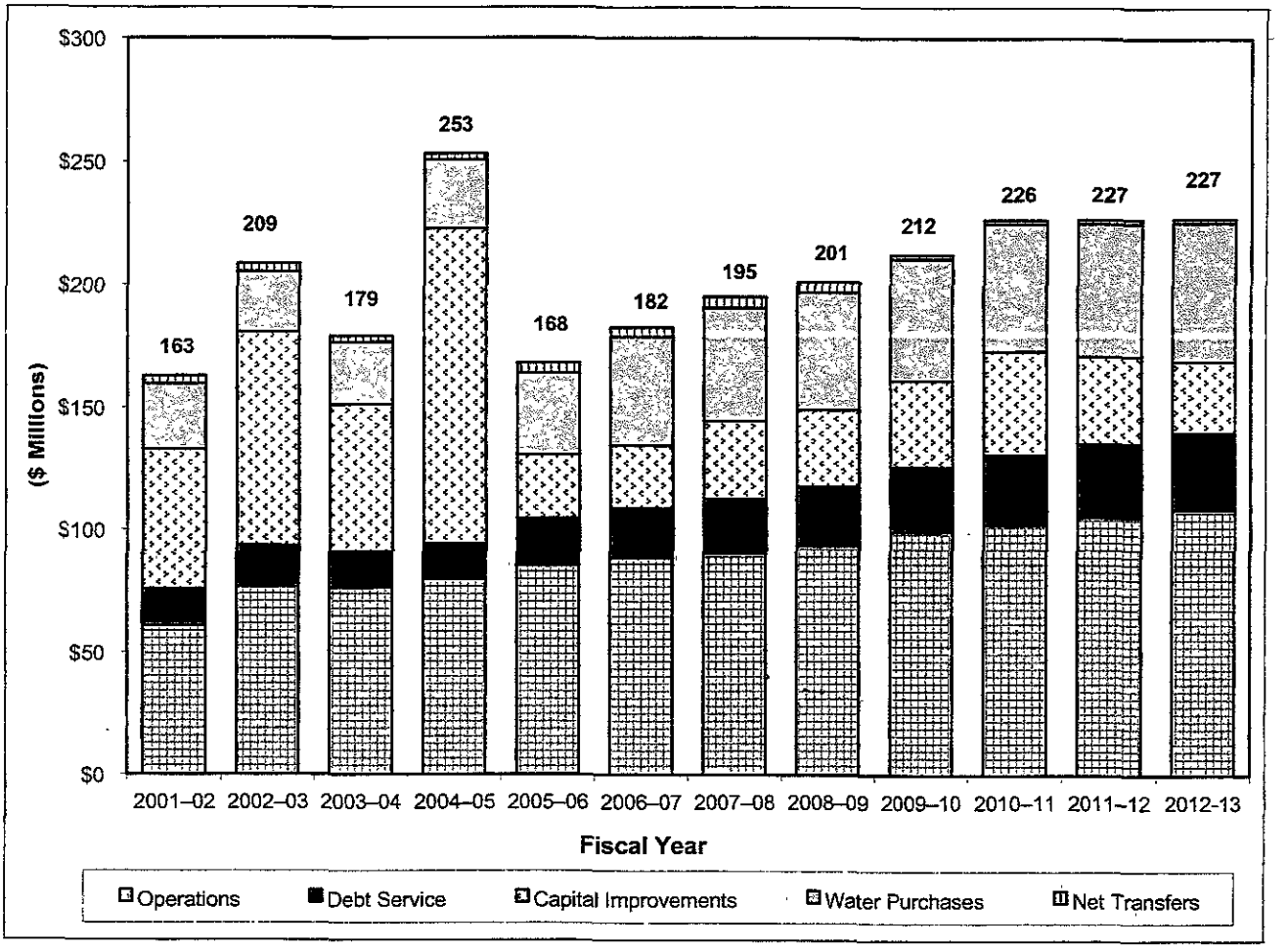
For FY 2003–04, Table 4-1 shows total requirements of $178.9 million to be met from a combination of current revenues, reserves, and debt. The adopted rates shown in Table 1-1 are budgeted to produce approximately $107.5 million in revenues from water usage. Property taxes are budgeted to be $18.5 million, and interest earnings and other revenue are budgeted to be $11.9 million for a total of $137.9 million. The table shows a net increase in reserves of $34.0 million due to a $39 million repayment to the Bureau for solar project and capital project loans offset by a $5 million decrease in several contingency reserves.

The Water Utility plans to use debt to raise $75.0 million in financing for the capital improvement plan. The District is currently using a combination of short and long-term debt. For the next five years, the District will continue to use both reserves and debt in conjunction with increasing water rates to meet revenue requirements occasioned by capital improvements totaling $272 million (in inflated dollars) for the five fiscal years 2003–04 though 2007–08. This funding will be used to upgrade many treatment plant systems that are needed to support the process revisions planned as part of the Stage 1 and Stage 2 work.

OVERVIEW OF LONG-TERM CAPITAL AND OPERATING PLANS

To develop a rate structure that will support planned work, staff analyzes the immediate needs of the District as well as anticipated requirements in the years to come. The projected outlays for the next ten years (see Figure 4-1) include capital and operating costs for the water quality and water supply issues discussed in Section III. The continuing appropriations for the capital investment needed to comply with water quality regulations can be seen in the capital portion of the bars. Large capital appropriations are planned for FY 2003–04 to fund numerous construction contracts planned to begin in that year. As capital appropriations for completion of treated water improvement projects begin to taper off by FY 2006–07, asset management costs are anticipated to initiate.

FIGURE 4-1
Ten-Year Program—Projected Expenditure



Payments to the Bureau of Reclamation for the District's share of the San Felipe Division of the CVP are not figured into the projected outlays. The timing of these payments depends on the terms of the final settlement and the Bureau of Reclamation's schedule to finalize accounting for water deliveries.

The annual operation expenditures are projected to increase only slightly in FY 2003–04 as District management responds to flat water sales and lower investment returns. Longer term, water treatment costs are projected to increase as the ozonation processes come on line at the completion of the Stage 2 construction. In addition, federal water purchase costs are projected to increase significantly as a result of a final settlement with the Bureau of Reclamation.

LONG-TERM FUNDING APPROACH FOR THE WATER UTILITY

In January of 2003, the District entered into a $100 million commercial paper program. This program provides the District with a short-term debt financing tool for the water utility's capital needs. The commercial paper program allows the District to take advantage of lower short-term interest rates.

The financial plan for the next ten years combines the commercial paper program with current revenues (from water sales), periodic revenue bond sales, reserves, and other sources to satisfy total expenses each year. The immediate challenge is to provide $272 million (in inflated dollars) for capital facilities and equipment between fiscal years 2003–04 and 2007–08; therefore, additional short-term and long-term debt financing is planned each year for future capital improvements. Table 4-2 below shows the funding sources for capital projects in fiscal years 2002–03 through 2007–08.

TABLE 4-2
Capital Improvement Projects Funding Sources
Fiscal Years 2002-03 Through 2007-08

(Millions of Dollars)

Water Utility Capital Improvement Projects $ Millions	02/03 Adjusted Budget	03/04 Adopted Budget	04/05 Projection	05/06 Projection	06/07 Projection	07/08 Projection
Funding Sources						
Current Revenue (i.e., operating income and operating reserves)	-0.1	26.9	22.9	10.8	-0.9	3.3
Future Year's Capital Reserves	7.2	-6.8	5.5	-1.8	3.3	-0.4
Borrow/ (Repayment) of CVP Reserves	35.0	-35.0	0	0	0	0
Revenue Bond Proceeds/ Other Debt	45.0	75.0	100.0	17.1	23.4	28.9
Total Water Utility Capital Improvements Funded (Constant Dollars)	**87.1**	**60.1**	**128.4**	**25.3**	**24.3**	**29.1**
Total Water Utility Capital Improvements Funded (Inflated Dollars)	**87.1**	**60.1**	**128.4**	**26.1**	**25.8**	**31.8**

Figure 4-2 shows the water rate projections that in combination with debt financing will finance needs to FY 2012–13. Over a five-year period, North County M&I rates are projected to increase from $375 per AF in FY 2003–04 to $530 per AF in FY 2008–09, an average increase of 7.2 percent per year. The projected growth in South County M&I rates is from $160 per AF in FY 2003–04 to $260 per AF in FY 2008–09, an average increase of 10.2 percent per year.

A financing strategy that includes debt financing for meeting needs and to moderate year-to-year increases in water rates is included in the ten-year plan shown in Table 4-3. Table 4-3 shows the projected revenues, expenditures, and reserves over the next ten years including proceeds from commercial paper and revenue bonds of $75 million dollars in FY 2003–04 and $100 million in FY 2004–05. This funding approach allows the District to maintain adequate operating reserve levels and lower but prudent capital reserves.

The District will see debt service rise from $15 million in FY 2003–04 to just over $22 million in FY 2007–08. This increase results from anticipated bond and commercial paper issuances partially offset by the pay off of the 1994 fixed rate revenue bonds. Total outstanding debt (excluding general obligation bonds) is projected to increase from $182 million in FY 2003–04 to $349 million in FY 2007–08.

FIGURE 4-2
Ten-Year Rate Projection

Treated Water & Ground Water Charges for M&I Uses

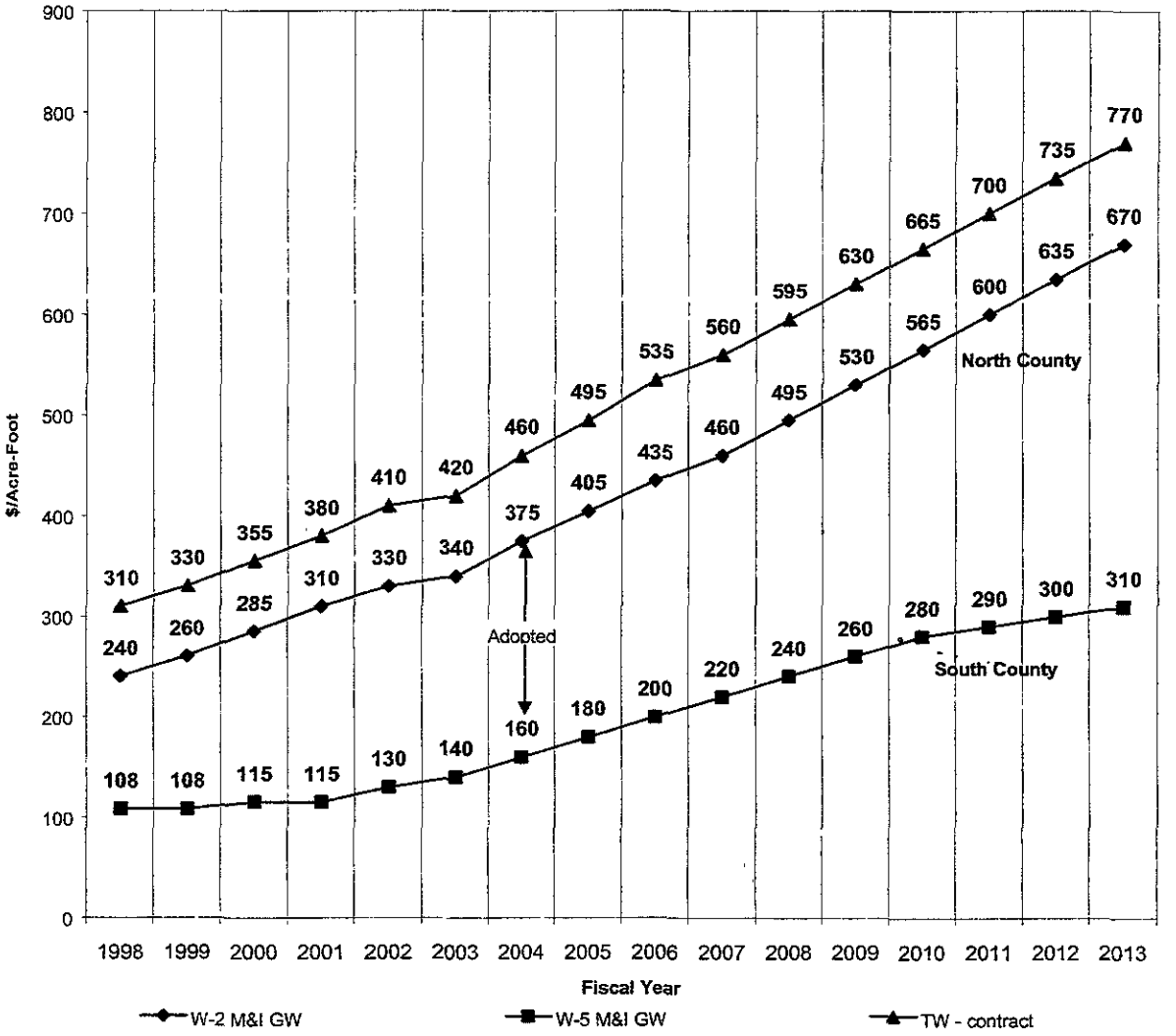


TABLE 4-3
Ten-Year Water Utility Plan

($ in Thousands)

	Actual	Actual	Adj Budget	2nd Pass Budget	2nd Pass Budget	Projected	Projected	Projected	Projected	Projected	Projected	Projected	Projected
Revenue Sources:	2000–01	2001–02	2002–03	2003–04	2004–05	2005–06	2006–07	2007–08	2008–09	2009–2010	2010–11	2011–12	2012-13
Groundwater Charges	$37,670	$39,901	$42,851	$46,189	$50,100	$54,210	$57,672	$62,349	$67,032	$71,797	$76,287	$80,497	$84,708
Surface/reclaimed Water Sales	$918	$713	$774	$854	$937	$988	$1,045	$1,123	$1,200	$1,277	$1,351	$1,425	$1,499
Treated Water Charges	$49,982	$53,055	$54,240	$60,493	$65,145	$70,079	$73,401	$78,052	$82,703	$87,354	$92,005	$96,657	$101,308
Inter-governmental services	$2,310	$1,974	$2,733	$400	$400	$596	$611	$626	$642	$658	$675	$692	$710
Total Operating Revenue	**$90,880**	**$95,643**	**$100,598**	$107,936	$116,582	$125,873	$132,729	$142,150	$151,577	$161,086	$170,318	$179,271	$188,225
Non-Operating Income:													
Property Taxes	$14,447	$13,865	$15,433	$18,542	$19,662	$21,808	$21,109	$21,231	$21,357	$21,488	$21,623	$21,764	$21,909
Interest	$15,367	$12,104	$5,865	$5,441	$6,085	$2,687	$3,166	$3,600	$3,707	$3,936	$3,947	$3,795	$3,795
Capital Contributions	$902	$102	$0	$5,807	$4,781	$3,450	$0	$0	$0	$0	$0	$0	$0
Other	$441	$9,718	$198	$226	$227	$198	$198	$198	$198	$198	$198	$198	$198
Total Non-Operating Income	$31,158	$35,789	$21,496	$30,016	$30,755	$28,143	$24,474	$25,029	$25,262	$25,622	$25,769	$25,757	$25,902
Total Revenue	**$122,038**	**$131,431**	**$122,094**	**$137,952**	**$147,337**	**$154,016**	**$157,203**	**$167,179**	**$176,839**	**$186,708**	**$196,087**	**$205,028**	**$214,127**
Operating Outlays:													
Operations	$70,317	$83,163	$94,516	$96,561	$102,939	$112,912	$126,801	$131,549	$135,758	$140,272	$145,027	$150,047	$155,336
Operating Projects	$5,403	$4,358	$6,599	$5,140	$4,632	$5,661	$6,003	$5,199	$5,578	$8,781	$9,044	$9,315	$9,594
Debt Service	$12,337	$14,929	$16,893	$14,611	$14,590	$19,358	$20,095	$22,082	$24,264	$26,414	$28,558	$30,121	$31,441
Total Operating Outlays	**$88,057**	**$102,450**	**$118,008**	**$116,312**	**$122,161**	**$137,931**	**$152,899**	**$158,830**	**$165,600**	**$175,467**	**$182,629**	**$189,483**	**$196,371**
Excess (Deficit) Revenues vs Operating Outlays	$33,981	$28,982	$4,087	$21,640	$25,176	$16,085	$4,304	$8,349	$11,239	$11,241	$13,458	$15,545	$17,756
Unreserved balance beginning of year	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Balance Available for Capital and Reserves	**$33,981**	**$28,982**	**$4,087**	**$21,640**	**$25,176**	**$16,085**	**$4,304**	**$8,349**	**$11,239**	**$11,241**	**$13,458**	**$15,545**	**$17,756**
Total Capital Appropriations	**$76,646**	**$56,998**	**$87,073**	**$60,146**	**$128,351**	**$26,064**	**$25,770**	**$31,803**	**$31,313**	**$35,227**	**$42,178**	**$35,658**	**$29,087**
Other Financing Sources/ (Uses):													
Operating Transfers Out - ISMP	$0	($3,397)	($1,783)	($738)	($704)	$0	$0	$0	$0	$0	$0	$0	$0
Operating Transfers Out -other/ CPSD admin	$0	$0	($75)	($1,788)	($1,874)	($1,900)	($1,900)	($1,650)	($1,650)	($1,650)	($1,650)	($1,650)	($1,650)
Operating Transfers Out - Solar Project	$0	$0	($4,600)	$1,279	$1,201	$544	$0	$0	$0	$0	$0	$0	$0
Operating Transfers out - FAHCE	$0	$0	$0	$0	$0	($2,084)	($1,922)	($2,817)	($2,619)	$0	$0	$0	$0
Revenue Bond/CP Proceeds	$54,516	$0	$45,000	$75,000	$100,000	$17,125	$23,392	$28,889	$28,748	$32,694	$23,866	$20,658	$14,087
CVP Reserve Transfer to fund capital			$35,000	($35,000)									
Total Other Financing Sources/ (Uses)	**$54,516**	**($3,397)**	**$73,542**	**$38,753**	**$98,623**	**$13,685**	**$19,570**	**$24,422**	**$24,479**	**$31,044**	**$22,216**	**$19,008**	**$12,437**
Budget Balance Available	**11,850**	**(31,413)**	**(9,445)**	**247**	**(4,552)**	**3,706**	**(1,897)**	**968**	**4,405**	**7,058**	**(6,504)**	**(1,106)**	**1,106**
Projected Carryover													
Balance Available	**11,850**	**(31,413)**	**(9,445)**	**247**	**(4,552)**	**3,706**	**(1,897)**	**968**	**4,405**	**7,058**	**(6,504)**	**(1,106)**	**1,106**
Appropriated to/(from) Reserves:													
Operating Reserves:													
Contingency Appropriation	$1,000	$1,170	$1,170	$1,163	$1,222	$1,379	$1,529	$1,588	$1,656	$1,755	$1,826	$1,895	$1,964
Working Capital Appropriation	$9,116	$9,751	$9,751	$9,693	$10,180	$11,494	$12,742	$13,236	$13,800	$14,622	$15,219	$15,790	$16,364
Supplemental Water Supply Appropo.	$4,907	$3,589	$4,907	$589	$589	$589	$589	$589	$589	$589	$589	$589	$589
Rate Stablization Reserve Fund	$1,500	$2,000	$3,000	$3,000	$3,000	$3,000	$3,000	$3,000	$4,000	$4,000	$4,000	$4,000	$4,000
San Felipe Appropriation	$2,740	$2,898	$2,898	$2,898	$2,898	$2,898	$2,898	$2,898	$2,898	$2,898	$2,898	$2,898	$2,898
Environmental Water Account	$0	$6,921	$6,921	$921	$921	$921	$921	$921	$921	$921	$921	$921	$921
Performance Efficiency	$6,616	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Total Operating Reserves	**$25,879**	**$26,329**	**$28,647**	**$18,263**	**$18,809**	**$20,281**	**$21,678**	**$22,232**	**$23,864**	**$24,785**	**$25,453**	**$26,093**	**$26,736**
Capital Reserves:													
Designated for Fixed Assets	$0	$1,729	$1,729	$1,816	$1,816	$1,816	$1,816	$1,816	$1,816	$1,816	$1,816	$1,816	$1,816
Designated for Future Years' Capital	$15,876	$15,542	$8,380	$15,148	$9,650	$11,460	$8,166	$8,581	$11,354	$17,491	$10,318	$8,573	$9,036
Total Capital Reserves	**$15,876**	**$17,272**	**$10,109**	**$16,964**	**$11,466**	**$13,276**	**$9,982**	**$10,397**	**$13,170**	**$19,307**	**$12,135**	**$10,389**	**$10,852**
Reserves for Contingent Liabilities:													
Bureau Repayment Appropriation	$59,883	$57,883	$18,283	$57,058	$57,459	$57,883	$57,883	$57,883	$57,883	$57,883	$57,883	$57,883	$57,883
Total Reserves for Contingent Liabilities	**$59,883**	**$57,883**	**$18,283**	**$57,058**	**$57,459**	**$57,883**	**$57,883**	**$57,883**	**$57,883**	**$57,883**	**$57,883**	**$57,883**	**$57,883**
Total Appropriated to /(from) Reserves	**$101,638**	**$101,484**	**$57,039**	**$92,286**	**$87,734**	**$91,441**	**$89,544**	**$90,512**	**$94,917**	**$101,975**	**$95,471**	**$94,365**	**$95,471**

NORTH COUNTY (ZONE W-2) FINANCES

Water Charge Zone W-2, North County, accounts for approximately 80 percent of District water consumption, but because of higher water rates due to higher North County costs, over 95 percent of the Water Utility's revenue. In January of 2003, staff met with the water retailers to discuss rising costs and declining revenue sources, that would have led to double the previously projected rate increase for FY 2003–04. As a result of working with the water retailers, staff reduced the recommended rates down to the level projected last year, which the Board adopted. As shown in Table 1-1, the Board adopted a $375/AF groundwater for non-agricultural (M&I) water and $37.50 per AF for agricultural water for FY 2003–04.

As shown in Table 4-4, total North County appropriations in FY 2003–04 are projected to decrease by approximately $29.5 million from FY 2002–03.

TABLE 4-4
Overview of North County Finances

($ Millions)

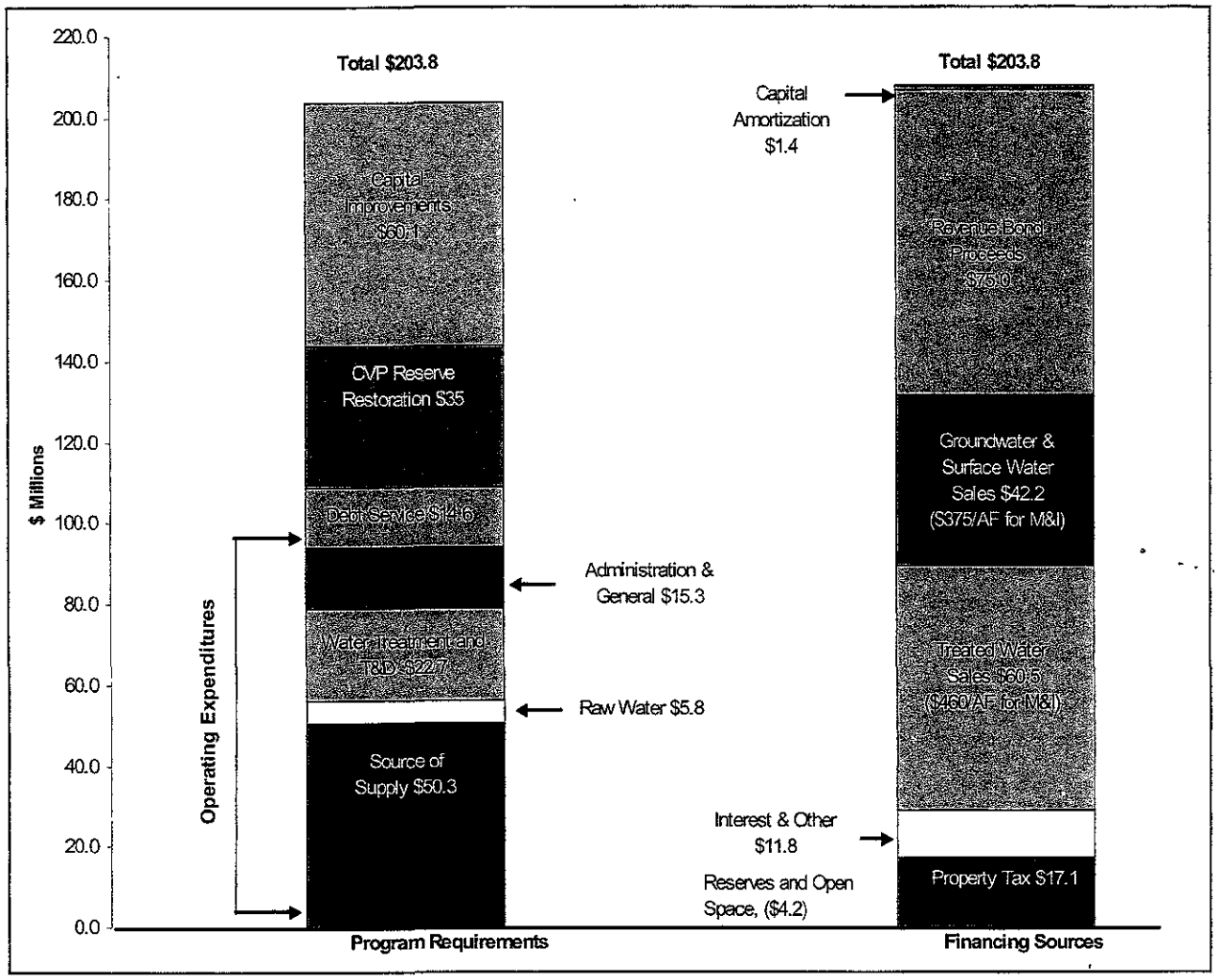
	Adjusted 2001–02	Budgeted 2002–03	Budgeted 2003–04
Allocated Revenue	$124.57	$113.98	$131.23
Revenue Bonds/ Other Debt Financing	**$0.00**	**$45.00**	**$75.00**
Receive Open Space Credit to North AG	$0.04	$0.06	$0.06
Less Open Space Credit Provided by North M&I	($0.53)	($0.64)	($0.71)
Less Open Space Credit to South AG	($0.50)	($0.59)	($0.65)
Capital Amortization from South Co.	$1.09	$1.09	$1.38
Allocated Costs			
Operation	$72.01	$87.65	$84.16
Imported Water	$25.85	$23.63	$24.53
Capital Improvements	$57.00	$87.07	$60.15
CVP Repayment	$0.00	$0.00	$0.00
Total Costs	**$154.86**	**$198.35**	**$168.84**
North County Surplus (Deficit)	($29.70)	($38.87)	$38.12

The groundwater charges adopted by the Board for FY 2003–04 are necessary to conduct "district activities in the protection and augmentation of the water supplies for users within a zone or zones of the district which are necessary for the public health, welfare, and safety of the people of this state" (District Act, Section 26.3).

Figure 4-3 shows the relationship between expenditures and the projected sources of revenue in Zone W-2. The revenues from the groundwater rates are necessary to carry out the full scope of activities needed to achieve the Board of Director's Ends Policies on water supply and quality.

FIGURE 4-3
Fiscal Year 2003–04
North County Water Utility Program Requirements and Financing Sources

($Millions)



SOUTH COUNTY (ZONE W-5) FINANCES

Rates in the South County (Water Charge Zone W-5) are based on the costs of specific facilities, imported water costs, and operations costs related to managing the groundwater basin, ensuring water quality, and measuring water supplies and usage. Under current policies for managing the finances of South County, water rates are set to maintain an approximate balance between revenues and costs. The cumulative balance is tracked, and projected water charges are set to keep the cumulative balance near zero, while maintaining relative stability in South County water rates. Successive years of surplus or deficit can occur, but rates are adjusted only when the trend in the cumulative surplus or deficit shows a significant imbalance.

Current Board policy adds an "open space" credit to agricultural revenues. The purpose of the credit is to preserve the open space benefits provided by agricultural lands by keeping agricultural rates low. The credit to agricultural water users in a water charge zone amounts to the difference in revenue from agricultural water use charged at a rate equivalent to 10 percent of the zone's M&I rate and that which would be generated if the agricultural rate were 25 percent of the zone's M&I rate. A Board policy setting the agricultural water charge at one-tenth of the zone's M&I rate was instituted in July 1998 and formally incorporated into the pricing policy in Resolution No. 99-21 (see Appendix B). As shown in Table 4-5, the Open Space Credit received by the South County was $0.50 million in FY 2001–02, estimated at $0.59 million in FY 2002–03, and projected to be $0.65 million in FY 2003–04. As the M&I rates for both zones are projected to grow over the next ten years, the amount of the Open Space Credit available to support agricultural water revenues will continue to increase.

For South County, the Board adopted a $160/AF groundwater charge for M&I water and $16 per AF for agricultural water. With these adopted rates for FY 2003–04, the South County deficit is estimated to be approximately $2.0 million (see Table 4-5). This would result in a cumulative deficit of $3.4 million at the end of FY 2003–04. The rate projection shown in Figure 4-2 is expected to produce an annual surplus in FY 2009–10. However, given the South County expenditure projection, the surplus will not reduce the deficit to zero over the next ten years.

The operating costs in South County are projected to increase to cover additional maintenance on Reach 1 of the San Felipe Division, additional operational costs for recharge facilities, security, and groundwater quality management. The amount for capital amortization increased because of recent capital outlays for the construction of recycled water facilities under an agreement with the SCRWA.

In addition to the tasks directly related to conveying and recharging water for South County customers, the Water Enterprise also conducts programs to protect water quality in both surface and groundwater resources. Additional programs educate both agricultural and domestic customers about water conservation methods and provide direct assistance with water audits and implementation of water-saving technology.

The groundwater charges adopted for FY 2003–04 in Zone W-5 are necessary to conduct "district activities in the protection and augmentation of the water supplies for users within a zone or zones of the district which are necessary for the public health, welfare, and safety of the people of this state" (District Act, Section 26.3).

Figure 4-4 shows the relationship between expenditures and projected sources of revenue in South County (Zone W-5). The revenues from the groundwater rates are necessary to carry out the full scope of activities needed to achieve the Board of Director's Ends Policies on water

supply and quality.

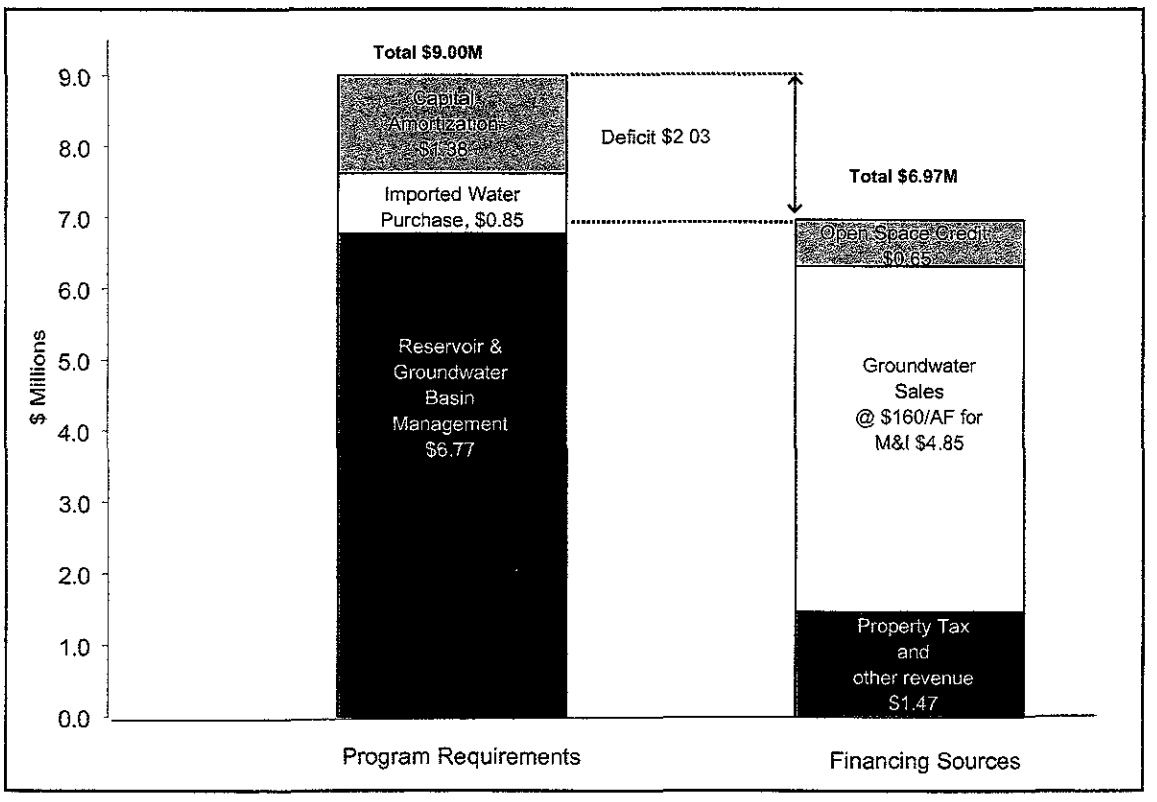
TABLE 4-5
Overview of South County Finances

($ Millions)

	Adjusted 2001–02	Budgeted 2002–03	Budgeted 2003–04
Allocated Revenue	$4.89	$5.38	$6.32
Received Open Space Credit from North County	$0.50	$0.59	$0.65
Allocated Costs			
Operation	$3.73	$5.89	$6.77
Imported Water	$0.85	$0.84	$0.85
Amortized Capital Improvements	$1.09	$1.09	$1.38
Total Cost	**$5.67**	**$7.82**	**$9.00**
Surplus (Deficit)	**($0.29)**	**($1.85)**	**($2.03)**
Cumulative Balance	$0.49	($1.35)	($3.38)

FIGURE 4-4
Fiscal Year 2003–04
South County Water Utility Program Requirements and Financing Sources

($ Millions)



APPENDIX A

WATER UTILITY RATE COMPONENTS AND ADOPTED RATES

TABLE A-1
Adopted Water Rate Components for Fiscal Year 2003–04

Component	Rate ($/AF)
Basic User, Zone W-2 (North County)	
Agricultural	37.50
M&I	375.00
Basic User, Zone W-5 (South County)	
Agricultural	16.00
M&I	160.00
Treated Water Surcharge	
Contract	85.00
Noncontract*	45.00
Water Master	11.75
Capital Cost Half Road Lateral System	2.75
Available Agricultural Discounts	
Mobile Lab	2.50
INAAP	2.00

***Note:** Treated water is provided in Zone W-2, the total charge adopted for contract treated water is the sum of $375 plus $85 or $460 per AF. Non-contract water will be available only from the Rinconada Water Treatment Plant in FY 2003–04, but non-contract deliveries will likely be limited during future construction periods.

TABLE A-2
Adopted Water Charges for Fiscal Year 2003–04

Type of Charge	AG Water ($/AF)	M&I Water ($/AF)
Groundwater		
Zone W-2	$37.50	$375.00
Zone W2 with Mobile Lab & INAAP Discounts	$33.00	N/A
Zone W-5	$16.00	$160.00
Zone W5 with Mobile Lab & INAAP Discounts	$11.50	N/A
Surface Water[1]		
Half Road Deliveries[2]	$30.50	$174.50
Other Zone W-5 Deliveries[3]	$27.75	$171.75
Other Zone W-2 Deliveries[4]	$49.25	$386.75
Minimum Charge Zone W-5[5]	$120.00	$120.00
Minimum Charge Zone W-2[6]	$281.25	$281.25
Stored Water		
Zone W-2	$37.50	$375.00
Zone W-5	$16.00	$160.00
Treated Water		
Contract[7]	N/A	$460.00
Noncontract[8]	N/A	$420.00
Recycled Water		
Gilroy	$25.00	$100.00

[1]Surface water charge is the sum of the basic user charge plus the water master charge. It also includes the capital cost and power, wherever applicable.

[2]Half Road = Basic User (AG or M&I @ $16 or $160) + Water Master ($11.75) + Capital ($2.75).

[3]Other Zone W-5 Deliveries = Basic User (AG or M&I @ $16 or $160.00) + Water Master ($11.75).

[4]Other Zone W-2 Deliveries = Basic User (AG or M&I @ $37.50 or $375.00) + Water Master ($11.75).

[5]Minimum Charge W-5 = 0.75 X Basic User W-5 (M&I @ $160.00).

[6]Minimum Charge W-2 = 0.75 X Basic User W-2 (M&I @ $375.00).

[7]Treated Water Charge is the sum of Basic User ($375.00) and Treated Water Surcharge ($85.00/AF).

[8]Treated Water charge for noncontract deliveries is offered to all treated water contractors in the Rinconada Water Treatment Plant service area for deliveries from that facility. The charge for non-contract deliveries is the sum of the basic user charge ($375.00) and the treated water surcharge for non-contract water ($45.00/AF).

APPENDIX B

DESCRIPTION OF WATER UTILITY REVENUE SOURCES, COST CENTERS, AND RESERVES

PRICING POLICY

The District's Board adopted Resolution No. 99-21 updating the Water Utility taxing and pricing policy in March 1999. This pricing policy incorporates four concepts: (1) water pooling, (2) water facilities cost pooling, (3) water resources management, and (4) revenue pooling. The complete policy follows after page B-4. The principal update to the policy in March 1999 was the Board's setting the agricultural water rate at 10 percent of the M&I rate in both Zones W-2 and W-5. Resolution No. 99-21 is included in this appendix.

WATER CHARGES

- Water charges include a **groundwater charge**, which is equivalent to the **basic user charge**, and is associated with the benefit of groundwater supplies. The groundwater charge is tax applied to water extracted from the groundwater basin in Zones W-2 and W-5, as shown in Appendix C. The basic user charge is applied to other types of water delivered by the District. There are two rates: one for agricultural water and one for M&I water.

- A **treated water surcharge**, which is associated with the benefit of receiving treated water, is levied in addition to the basic user charge on water delivered from the District's water treatment plants.

PROPERTY TAXES

Ad valorem taxes provide revenue to support several benefits which are general in nature serving all or large areas of the County. Some of these benefits are the availability of imported water to the County, recreation associated with the District's reservoirs, and replenishment of the County's groundwater subbasins.

The District receives a portion of the 1 percent countywide tax revenues as allocated by the County Assessor. Tax Zones W-3 and W-4, as well as a countywide ad valorem tax, are part of the 1 percent allocation.

The District also levies additional ad valorem taxes under Article XIII A of the State Constitution to meet: (a) prior approved general obligation bond debt service in Zone W-1 (zones are shown on the map in Appendix C) and (b) part of the contractual obligations for State Water Project State of California water with a countywide tax.

DEBT FINANCING

To fund the construction of new facilities, the District has historically relied on both pay-as-you-go financing and long-term debt financing from revenue bonds as authorized by the voters in 1977. The last remaining 1977 authorized revenue bonds were sold in April 1984. In January 1984, State Legislation allowed the District to seek authorization to issue revenue bonds as needed following the Board's approval. County voters approved this authorization in November 1984. The District sold an additional $30 million of revenue bonds in November 1985 to provide needed funding for ongoing

projects. In August 1986, the District refunded all outstanding water revenue bonds. Again, in June 1994, the District took advantage of favorable market conditions to refund the remaining 1986 water revenue bonds. The 1994 refunding totaled $65.9 million at an effective interest rate of 5.2 percent. In December 2000, the District issued tax-exempt and taxable bonds in the amount totaling $60.3 million. In January 2003, the District decided to take advantage of the lower interest rates offered through short-term debt and entered into a $100 million commercial paper program.

WATER UTILITY RESERVES

There are thirteen reserves designated in the Water Utility Enterprise Fund. Policies and procedures for fund balance reserves, as approved by the District Board of Directors in 2001 can be found on page B-6.

WATER UTILITY ZONES

The major sources of water revenue are from charges levied on all groundwater extracted within Zone W-2 and Zone W-5 of the District and from the sale of approximately 110,000 AF of treated water. Other water charges are made for surface water diversions and sales of recycled water in the Gilroy area. A brief description of each water zone (see Water Utility Zones map in Appendix C) within the Water Utility Enterprise follows:

Zone W-1: Encompasses the groundwater basin in the northern County and small peripheral areas outside the groundwater basin, with the retail service areas of privately-owned public utilities and municipal water departments using water pumped from the groundwater basin. This area provides the security for general obligation bonds. Zone W-1 comprises an area of approximately 290 square miles and includes all or portions of 13 of the County's 15 cities, plus some unincorporated territory.

Zone W-2: Encompasses the Santa Clara Valley groundwater basin north of Metcalf Road. It includes those groundwater producing facilities that benefit from recharge of the basin with local and imported water. A charge is levied for all groundwater extracted from this zone.

Zone W-3: Encompasses the Coyote and Llagas groundwater basins in the area from Metcalf Road in the north to just south of the City of Morgan Hill. Part of the County property tax within the 1 percent limit is allocated to this zone.

Zone W-4: Contains all of Zone W-2 and lands outside Zone W-2 that use or otherwise benefit from locally conserved water and from the importation and distribution of water from the South Bay Aqueduct. This area also receives an allocation of County taxes. These tax revenues are used to pay for the cost of water, recovery of accumulated overdrafts, control of land surface subsidence, and to sustain the emergency supply of water.

Zone W-5: Is comprised of the entire groundwater basin from Metcalf Road south to the Pajaro River. Charges are levied for all groundwater extracted from this zone.

Zone W-6: Represents the old Gavilan Water Conservation District and is within Zone W-5.

WATER UTILITY COST CENTERS

Source of Supply Cost Center contains all the anticipated expenditures that relate to obtaining, producing, and protecting a water supply and includes all District conservation, recycling, and importation costs.

Raw Water Transmission and Distribution Cost Center contains all expenditures relating to the distribution of raw water. The distribution system consists of pipelines, canals, and percolation ponds and includes the use of creek systems.

Water Treatment Cost Center contains all expenditures associated with the treatment of water at the Rinconada Water Treatment Plant, Penitencia Water Treatment Plant, and Santa Teresa Water Treatment Plant.

Treated Water Transmission and Distribution Cost Center contains all expenditures relating to the distribution of treated water to water utilities and includes costs associated with the treated water reservoirs, pumping plants, pipelines, and turnouts.

Administration and General Cost Center contains all expenditures of an administrative nature, which are not assigned to one of the other four cost centers. Work performed in this cost center covers items such as the collection of groundwater charges, financial and cash flow studies, annual reports, and general water quality management and resource planning.

RESOLUTION 99-21

RESOLUTION NO. 99- 21

ADOPTING "WATER UTILITY TAXING AND PRICING POLICY" AND RESCINDING RESOLUTION NO. 96-82

WHEREAS, the Santa Clara Valley Water District (District) adopted a District mission, goals and objectives on February 19, 1985, in order to conduct a sound water management program that serves the community; and

WHEREAS, the District Act authorizes the District to enter into water sales contracts and to levy and collect taxes and assessments on property within the District and in the respective zones of the District and sets forth requirements for groundwater charges and rates between agricultural and nonagricultural water; and

WHEREAS, several Board resolutions, as identified in Exhibit "A," are related to the management of water resources and the implementation of this water taxing and pricing policy; and

WHEREAS, several changes which affect revenue sources and benefit distribution have occurred since adoption of Resolution No. 96-82. These changes include: (1) passage of Resolution Nos. 98-44 and 98-45 setting agricultural charges for groundwater and surface water at 10 percent of the nonagricultural charges; (2) revisions to the policy governing sale of noncontract water in 1998; (3) pending completion of an agreement to act as the wholesaler to deliver recycled water in South County.

BE IT RESOLVED, by the Board of Directors of the District as follows:

1. **The policy of the District in the areas of taxation and water pricing for water utility revenues shall be and is hereby adopted:**

Policy Statement

The intent of this water utility taxing and pricing policy is to provide revenue for the management of water resources and operation of the water utility enterprise. This policy establishes a framework for establishing a system of water charges as permitted by the District Act to meet revenue requirements and to allocate costs amongst the beneficiaries. The general approach is to charge the recipients of the various benefits for the benefits received from the District's comprehensive water utility program.

The consumptive and nonconsumptive benefits provided by District water supply facilities and operations are listed and described below:

- Provision of a water supply and effective management of water resources available to the community from a variety of sources of supply, transmission, and water treatment facilities operated by the District.
- Protection of water quality through the purification and treatment of water and the protection of water supplies.
- Stewardship of watersheds and riparian corridor.
- Administration of related programs and projects such as recycled water and water conservation administered solely by the District or in partnership with another organization.

- Ancillary flood protection.
- Recreation, such as fishing, boating, picnicking, hiking, and other related recreation activities.
- Support for the economic well being of the community.
- Protection of the community infrastructure from subsidence.

2. Policy Implementation

The following water taxing and pricing concepts and framework shall be implemented in order to provide for revenue in order to continue providing direct and ancillary benefits to the customers of the District and the community of Santa Clara County.

Water Taxing and Pricing Concepts

- ***Water Pooling***: Water is considered to be a single commodity irrespective of the water's source or cost. It is a single commodity whether it is from water provided locally, imported, or recycled, and all users benefit from the availability of multiple sources of water.
- ***Water Facilities Cost Pooling***: All water supply facilities contribute to the common benefit of effective water resources management. In general, the water charges and property taxes are based on the common benefits of the capital and operations outlays, rather than reference to named facilities, with the exception of the liability for bonded indebtedness which is applied to each zone of benefit.
- ***Water Resources Management***: Water supplies are managed, through taxing and pricing, to obtain the effective utilization of the water resources of the District to the advantage of the present and future populations of the County. This concept provides for development of taxing and pricing structures that will achieve the effective use of available resources and conserve supplies for potential drought conditions.
- ***Revenue Pooling***: For the most part, water utility revenues are collected in a common fund and not designated for a specific cost. Such revenues are available for the general capital and operating outlays of the water utility enterprise. Some revenues such as certain property taxes are specifically designated for debt service and the fixed costs of the State Water Project, and are not available to the common fund. Water charges are established to provide the revenues that are required in the common fund for general capital and operating outlays and that are over and above revenues from ad valorem taxes, interest, and miscellaneous sources. This provides flexibility in managing continuing operations and funding capital outlays.

Water Taxing and Pricing Framework

The following procedures are intended as a general framework to guide staff in the development of a water rate structure implementing this policy:

- ***Zones of Benefit***: Zones of benefit are to be identified and established in accordance with the District Act. Groundwater charges and property taxes are levied for the benefits received by the water users and property owners benefitting from that zone. For each zone, a basic

water user charge is determined for current groundwater and raw surface water users to be applied to the quantities of water used or consumed.

- *Basic Water Charge Zones*: The objective of establishing various water charge zones is to recover costs for the benefits resulting from conservation, import, and recharge of water which occur only within that zone. Water charges are levied for water producing operations, such as groundwater pumping and raw surface water diversion. In addition, users may be subject to specific charges that meet special needs of a group of users, such as water master charges for surface water deliveries, a capital charge for equipment or facilities, and power costs for pumping.

- *Treated Water Surcharge*: A treated water surcharge shall be added to the basic water charge for the price of treated surface water delivered by the District. The charge is to be established at an amount that would promote the effective use of available water resources. The charge may differ between treatment plants to better manage regional variations in groundwater conditions.

- *Costs for Specific Benefits*: Whenever costs associated with specific benefits are clearly and easily measurable, those costs shall be charged to the beneficiaries, in accordance with their specific zones of benefit. Where there is a question as to the identity of the beneficiary or the method of measuring the benefit, the allocation of costs should remain flexible and be determined in accordance with accepted practices and sound judgements based on the four water pricing concepts. The District recognizes and supports the State Legislature's limitation imposed on the District that rates for agricultural water shall not exceed one-fourth of the rate for all water other than agricultural water. In order to encourage the continuance of agricultural use of land in the County, to encourage the preservation of open space, to defer intensification of users and to further support the limitation imposed by the State Legislature, it is the District's policy that rates for agricultural water shall not exceed one-tenth the rate for all water other than agricultural water.

  Both water charges and property taxes are used to recover costs incurred for the benefit of current water users. The costs for future supply sources can be recovered using current revenues or through project specific long-term financing.

- *Balancing Costs*: The District recognizes that there may be imbalances between revenues and costs within a zone of benefit from year to year. The District will strive to achieve balance over the long-term in accordance with the District Act and to properly charge recipients for the benefits received.

- *Incentives*: Incentives in the form of subsidies may be provided in order to reduce the price of specific sources of water in order to optimize use of available or future water resources.

- *Recycled Water*: From time to time, the District may enter into agreements to provide wholesale delivery or other services related to recycled water. The District will strive to recover the costs of these facilities consistent with the pooling concepts outlined above, while adhering to the specifics of any agreement.

Resolution Adopting "Water Utility Taxing and Pricing Policy" and Rescinding Resolution No. 96-82

3. **Executive and Staff Limitations**

District staff are authorized to develop a water rate structure which meets the objectives set forth herein, in accordance with the District Act, and using the concepts set forth above. The District's rate structure is implemented only by resolutions approved by the Board of Directors.

Staff is authorized to recommend water charges for consideration by the Board in accordance with the District Act. Water charges, if any, shall be recommended by staff each year be at fixed and uniform rates for agricultural water and for all water other than agricultural water, respectively, except that each such rate for agricultural water shall be one-tenth of the rate for all water other than agricultural water. The Board has determined that agricultural use of lands is of value to the County and the state, and that agricultural lands provide an open space benefit. The Board's limiting staff to a recommendation of agricultural water rates below the maximum allowed by the District Act will benefit water users Countywide, and is necessary to carry out the policies of the State Legislature and the District Board of Directors.

Staff is authorized to prepare, for the Board's consideration, resolutions for the collection of property taxes as needed and authorized under applicable laws.

4. **Previous Policy Rescinded**

The "Water Taxing and Pricing Policy," adopted by Resolution No. 96-82, is hereby rescinded.

PASSED AND ADOPTED by the Board of Directors of Santa Clara Valley Water District on March 16, 1999 by the following vote:

AYES: Directors Gross, Zlotnick, Judge, Kamei, Sanchez, Estremera, Wilson

NOES: Directors None

ABSENT: Directors None

SANTA CLARA VALLEY WATER DISTRICT

By: _____
Chair/Board of Directors

ATTEST: LAUREN L. KELLER

_____
Clerk/Board of Directors

EXHIBIT "A"

SANTA CLARA VALLEY WATER DISTRICT BOARD RESOLUTIONS USED AS A BASIS FOR WATER TAXING AND PRICING POLICY

Resolution 68-4 to govern the management of its water supply and water facilities so as to equalize the availability of water throughout the District by every means available to it to the fullest extent consistent with equity and sound conservation principles; and

Resolution 71-19 adopting "Water Taxing and Pricing Policy;" and

Resolution 74-28 adopting rules and regulations for the service of surface water and establishing a fee and charge structure; and

Resolution 79-87 providing for water importation tax credits and repealing prior resolution which was adopted November 23, 1964.

Resolution 81-44 declaring policy regarding payment of in-county credit for ensuing fiscal years and that no unit rate is provided for the in-county credit and no payments made from and after fiscal year 1983-1984.

Resolution 90-73 adopting and authorizing the filing and implementation of the Santa Clara Valley Water District Urban Water Management Plan which provides for water conservation efforts which are funded by the District.

SANTA CLARA VALLEY WATER DISTRICT

POLICIES AND PROCEDURES

FINANCIAL SERVICES

FUND BALANCE RESERVES INDEX

Santa Clara Valley Water District
POLICIES AND PROCEDURES
Financial Services

FUND BALANCE RESERVES
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Santa Clara Valley Water District
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FUND BALANCE RESERVES

OVERVIEW

Introduction

The following Fund Reserves Policy is established in accordance with the Board's Executive Limitation, EL-1.4.3, "With respect to the actual, ongoing financial condition and activities, the CEO/GM shall not cause or allow the development of fiscal jeopardy or a material deviation of actual expenditures from Board priorities established in Ends policies." "Further, without limiting the scope of the foregoing by this enumeration, he or she shall not use any unappropriated long-term reserves or undesignated fund balance."

Based on the CEO's interpretation of the above policy, District Fund Balance Reserve policies and procedures have been developed and outlined herein.

The objective of this policy is to ensure the provision of adequate reserves and to provide guidance for the appropriate accumulation and use of District Reserve Funds. In addition to this policy, both long-term goals and short-term objectives will influence and direct the allocation of annual operating funds for the various reserves. The District classifies reserves as either Operating, Capital, Debt Service, or Funded and Contingent Liabilities.

Purpose

Fund Reserves represent a portion of fund balance that is segregated for a specific future use, or is not available for appropriation or expenditure. Adequate reserve levels are a necessary component of the District's overall financial management strategy and a key factor in external agencies' measurement of the District's financial strength.

General Policies

This policy establishes the purpose and use of such reserve funds, as well as the procedures for funding and maintaining reserves.

- Each budget year, the District shall establish reserve appropriations necessary to meet its legal covenants, set aside cash to pay expenses prior to the receipt of tax revenues, provide for prudent funding of operating contingencies and contingent liabilities, and sustain its capital improvement program.

- There are four categories of reserves: Operating, Capital, Debt Service, and Funded and Contingent Liabilities.

- Reserves are to be fully funded each budget year, or staff will establish an intermediate and long-term funding plan for the reserve as part of the budget process.

- Reserve funds will not be spent for any function other than the specific purpose of the reserve from which they are drawn, without explicit Board approval for the exception. All appropriations from reserve accounts require Board-approval.

- Debt Service Reserves are administered by debt trustees and set at levels established by loan covenants.

- All remaining reserves shall be reviewed each year by staff to determine reserve level requirement recommendations within guidelines established by this interpretation of Board policy.

OPERATING RESERVES

Contingency Appropriations

The fund balance reserves designated for operating contingencies are established at a fixed amount at the beginning of each fiscal year to provide for unforeseen needs, revenue shortfalls, and emergency appropriations during the year.

Fund	Fund Reserve Levels
Water Enterprise Fund	1% of Budgeted Operating Outlays
District General Fund	.5% of Budgeted Operating Outlays
Other Funds • Lower Peninsula Watershed • West Valley Watershed • Guadalupe Watershed • Coyote Watershed • Uvas/Llagas Watershed • Clean Safe Creeks Fund • Watershed & Stream Stewardship • Equipment Service Fund • Risk Insurance Funds	1.3% of Budgeted Operating Outlays per Each Fund.

Working Capital Reserves

The Working Capital Reserve provides for available cash assets from which operating and capital expenditures are temporarily financed prior to the receipts of revenues for the fiscal year.

Fund	Fund Reserve Levels
Water Enterprise Fund	One month (1/12) of budgeted operating outlays
District General Fund**	1/2 of estimated property tax revenues
General Fund sub-fund ** • Watershed & Stream Stewardship Fund Watershed Funds • Lower Peninsula Watershed • West Valley Watershed • Guadalupe Watershed • Coyote Watershed • Uvas/Llagas Watershed • Clean Safe Creeks Fund	1/2 of budgeted operating outlays

* This *Working Capital* operating reserve fund is required under the Water Utility System Master Resolution (Resolution No. 94-58 and the Second Supplemental Resolution No. 2000-64.)

** The Watershed and Stream Stewardship Fund is a subfund of the General Fund, however the Working Capital Reserves for this fund will be maintained in accordance with Watershed Fund requirements due to its related nature and purpose.

Performance Efficiency and Accountability Program Reserves

The Performance Efficiency and Accountability Program (PEAP) reserves provide funding for pilot or special one-time projects, studies, or activities.

The PEAP Reserves are funded by the remaining balance of revenues and expenditures appropriated to restore other reserves and contingencies to their authorized amounts at year-end. The reserve level should not exceed 10% of the prior year's operating expenditures excluding debt service.

Reserved for Encumbrances

Outstanding encumbered purchases, contracts, and other commitments for which the District bears an obligation are recorded as liabilities. These reservation of Fund Balance and Fund Equity represent funds set aside to ensure payment of the District's liabilities. The reserve's balances are adjusted annually to reflect total obligations at year-end.

Water Enterprise Operating Reserves

The following reserves have been established at contractual or recommended levels appropriate to the specific purpose of each reserve:

Reserve	Purpose	Fund Reserve Levels
Supplemental Water Supply Appropriation	Provides funding for supplemental water purchases, participation in water banking or conservation opportunities, and other water supply needs.	Not to exceed $11 million which represents the highest annual amount expended for supplemental water supply needs.
Rate Stabilization Reserve	Reserve established to both 1) mitigate fluctuations in water rates by providing funding during periods of extraordinary operating expense or water revenue shortfalls, and 2) to supplement District revenues to meet debt service coverage requirements. Per bond covenants, transfers from the Rate Stabilization Reserve are to be used to pay operation and maintenance costs in order to offset extraordinary expenses and revenue shortfalls, and to supplement District revenues to meet Debt Service Coverage requirements, upon Board approval.	Budgeted reserve levels correlate to annual debt service. The reserve minimum is budgeted to not less than 10% of annual debt service due on all Parity Obligations. This amount may be transferred each year to the Water Enterprise Fund for purposes of calculating the net Water Utility System revenues needed to meet the rate covenant in the Water Utility System Master Resolution, as amended (Second Supplemental Resolution No. 2000-64).
San Felipe Appropriations	Contractually stipulated operating reserves established pursuant to the District's 1977 Agreement (No. A0315) and the 1986 Agreement (No. A0770) with the U.S. Bureau of Reclamation (USBR), for the operation and maintenance of the San Felipe Division of the Central Valley Project. Facility expenditures from the reserve appropriations are restricted to meeting unforeseen extraordinary costs.	The following minimum reserve levels are maintained for each of the three San Felipe Reaches, in accordance with the Bureau of Reclamation contract: • San Felipe Reach 1-$1,000,000* • San Felipe Reach 2-$ 500,000 • San Felipe Reach 3-$ 250,000 ** Reach 1 Reserve is jointly maintained with San Benito County Water District.* The maximum amount of this reserve should not exceed $10 million.
Environmental Water Banking Reserve	Established by Board action on February 6, 2001 to receive any revenues generated by the Agreement Between the Department of Water Resources of the State of California, Santa Clara Valley Water District and Kern County Water Agency for 2001 Water Resources for Support of the Environmental Water Account Under the CALFED Program. (Agreement #A2438W) and other funds which may in the future be allocated by the Board. This reserve provides a secure mechanism to make sure funds are available to meet financial obligations generated by the agreement and to offset future capital and operating expenses related to the District's water banking activities.	The reserve is funded by revenues and/or other funding sources received in excess of costs, to a maximum balance set by Board action of $15 million.

CAPITAL RESERVES

Fixed Asset Reserves

The purpose of this reserve is to accrue funding for asset purchases and replacement in the period of use. Through this funding reservation, monies are set aside for planned future asset expenditures within specified categories. In addition, this reserve provides a funding source for unanticipated asset needs, mitigates the impact of large budget expenditures, and assists with asset management and long-range planning.

Reserves are designated within three asset categories: Equipment, Vehicles, and Facilities. The Fixed Asset Reserves do not include reserves for dam and pipeline infrastructure or flood control improvements as these assets are generally funded through debt issues.

An amount equal to annual depreciation in each of the three fixed asset categories is designated to the asset reserves as Fund Balance or Fund Equity is available. Funding in excess of annual depreciation may also be accrued to make up for prior unmet reserve funding. Fixed Asset Reserve levels are not to exceed the total accumulated depreciation balance applicable to each asset category.

Use of this fund is restricted to appropriations for asset replacement and purchases as needed, under the adopted budget and through Board approved budget adjustments.

Designated for Current Authorized Projects

This reserve provides for the funding of remaining authorized capital appropriations as of the close of the fiscal year. Capital Projects operate on a multi-year basis; hence all amounts approved but unspent on currently active Capital Projects may carry forward (with the exclusion of unspent labor and benefits) in this reserve until the projects are complete.

Reserve balances are adjusted annually to reflect total obligations at year-end.

Designated for Future Years Capital

This reserve is provided within each District fund in support of future capital needs, as projected in the District's 5-year Capital Improvement Plan.

For the Clean, Safe Creeks Program Fund, the remainder of both operating and capital revenues not otherwise re-appropriated to restore the fund's operating reserves to their authorized amounts, are appropriated to this reserve for use in financing projects on a pay-as-you-go basis.

For all other funds, Future Years Capital Reserve balance is the accumulated remainder of revenues not otherwise re-appropriated to restore all capital reserves and contingencies to their authorized amounts.

DEBT SERVICE RESERVES

Debt Service Reserves

Debt Service Reserves are to provide a reservation of funds for current debt service payment on outstanding debt.

Reserves are established in accordance with Bond or Certificate of Participation (COP) resolutions and initially funded from proceeds of the issuance. Each Debt Service Reserve Fund is required to be maintained in accordance with resolution mandates.

Debt Service Reserves are held and administered by the issuance trustee, to be used for payment of the principal and interest in the event that on any payment date the fiscal agent does not receive sufficient installment payments from the District for such purpose.

FUNDED AND CONTINGENT LIABILITIES

Funded and Contingent Liabilities

These reserve funds are established at recommended levels appropriate to each reserve for the purpose of discharging a future contingent liability.

The contingency reserve funds defined below are ongoing contingency reserves.

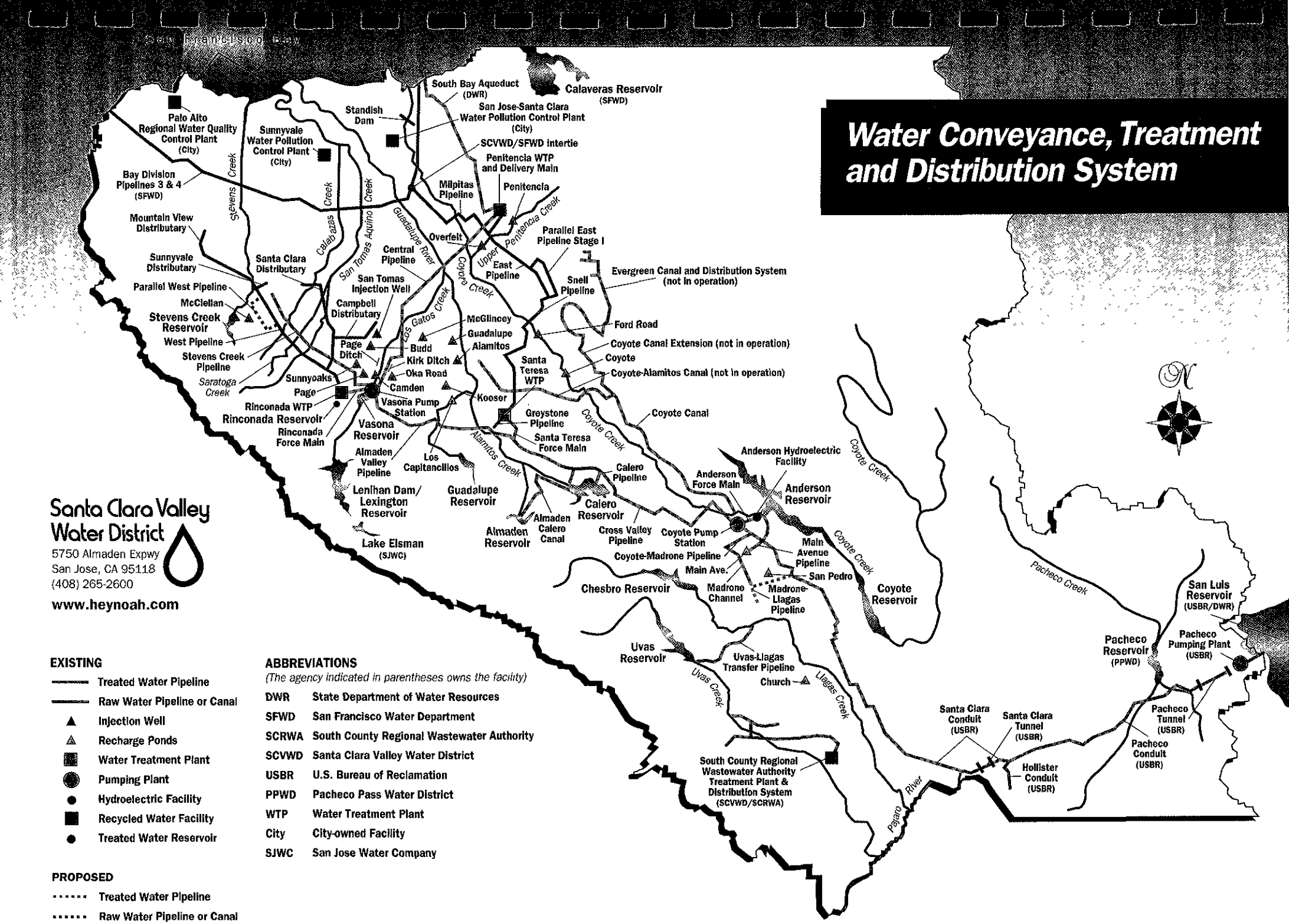
Water Enterprise Contingent Liability	Purpose	Contingency Reserve Levels
U.S. Bureau of Reclamation: CVP Repayment Appropriation	Established by Board policy to provide funding for the District's possible future contractual liability to the U.S. Bureau of Reclamation for the Central Valley Project water rate increase obligations.	Reserve appropriation levels are established by authorized appropriations under the adopted budget. Amount is set based on the estimated deficit accrued from water purchase contract.

Risk Insurance Appropriations	Purpose	Contingency Reserve Levels
a. General Liability	Established by Board policy to fund the contingent liability for the District's self-insured portion of general liability and property damage claims. General Liability commercial insurance coverage is purchased for claims exceeding $2 million.	Reserve appropriation amounts are determined through an independent actuarial evaluation. Current reserve levels are established under a 95% confidence level, to include payment on both incurred but not paid and incurred but not reported claims.
b. Worker's Compensation	Established by Board policy to fund the contingent liability for the District's self-insured portion of worker's compensation claims. Workers' Compensation commercial insurance coverage is purchased for claims exceeding $250,000.	Reserve appropriation levels are determined through an independent actuarial evaluation. Current reserve levels are established under a 95% confidence level, to include payment on both incurred but not paid and incurred but not reported claims.
c. Catastrophic Loss	Established by Board policy to fund the District's self-insured contingent liabilities for non-insured claims.	Reserve appropriation levels are established by authorized appropriations under the adopted budget, with a target reserve level of $5 million dollars.

APPENDIX C

MAPS

Water Conveyance, Treatment and Distribution System



Santa Clara Valley Water District
5750 Almaden Expwy
San Jose, CA 95118
(408) 265-2600
www.heynoah.com

EXISTING

- Treated Water Pipeline
- Raw Water Pipeline or Canal
- Injection Well
- Recharge Ponds
- Water Treatment Plant
- Pumping Plant
- Hydroelectric Facility
- Recycled Water Facility
- Treated Water Reservoir

PROPOSED

- Treated Water Pipeline
- Raw Water Pipeline or Canal

ABBREVIATIONS

(The agency indicated in parentheses owns the facility)

DWR	State Department of Water Resources
SFWD	San Francisco Water Department
SCRWA	South County Regional Wastewater Authority
SCVWD	Santa Clara Valley Water District
USBR	U.S. Bureau of Reclamation
PPWD	Pacheco Pass Water District
WTP	Water Treatment Plant
City	City-owned Facility
SJWC	San Jose Water Company

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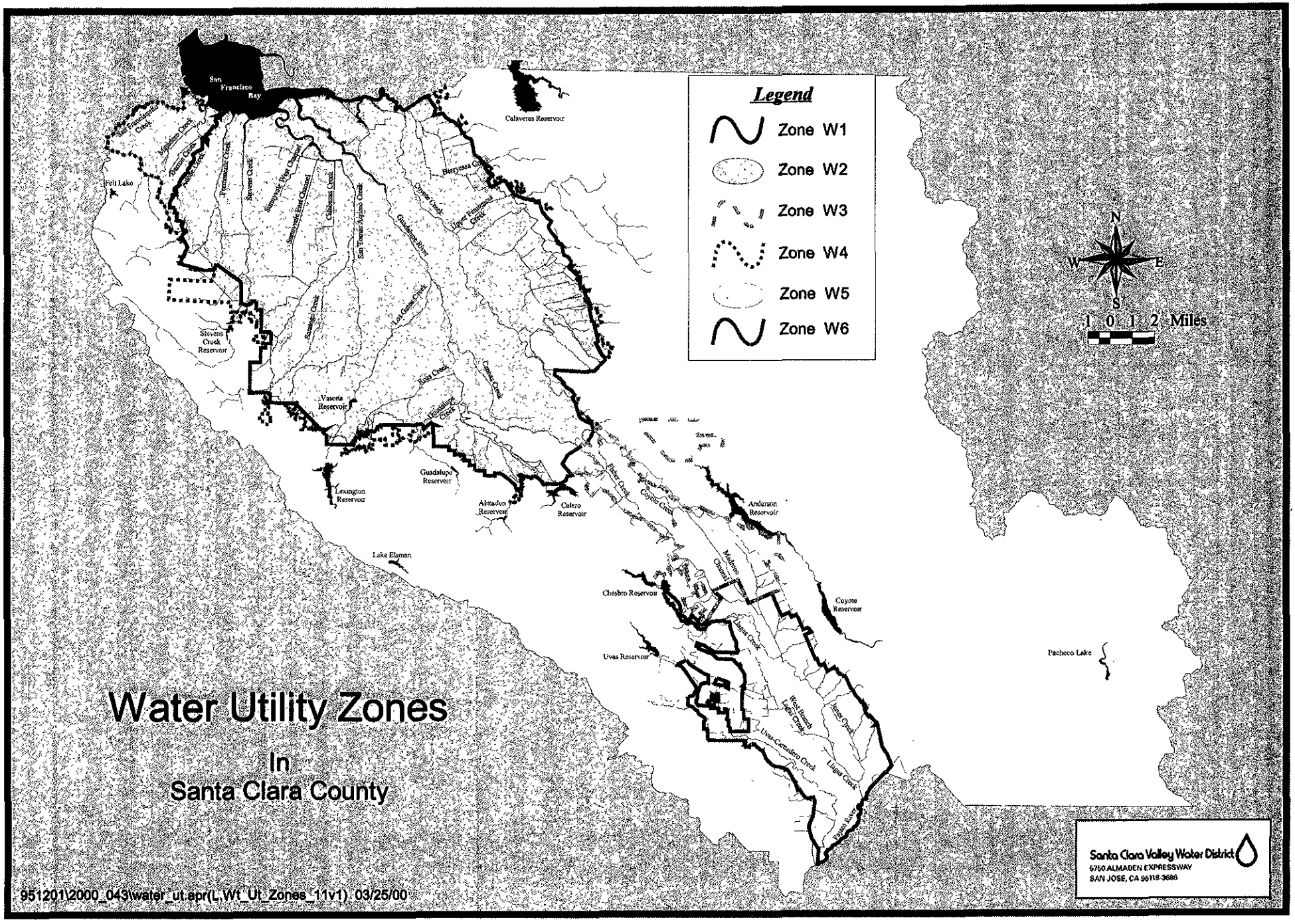
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Calaveras Reservoir
Stevens Creek Reservoir
Vasona Reservoir
Lexington Reservoir
Guadalupe Reservoir
Almaden Reservoir
Calero Reservoir
Anderson Reservoir
Coyote Reservoir
Chesbro Reservoir
Uvas Reservoir
Lake Elsman
Pacheco Lake
Peli Lake
Water Utility Zones
In
Santa Clara County
Santa Clara Valley Water District
5750 ALMADEN EXPRESSWAY
SAN JOSE, CA 95118-3686
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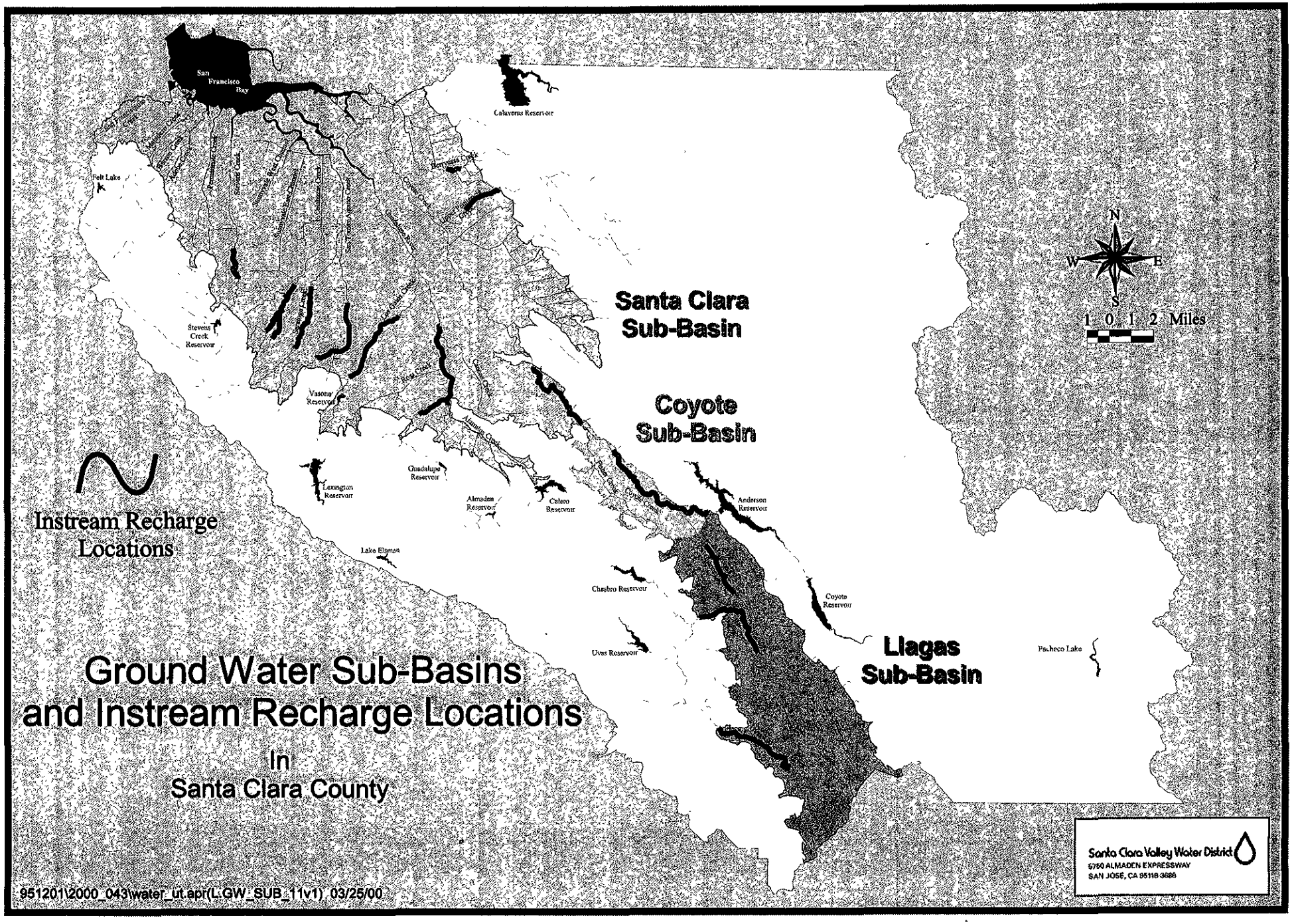
San Francisco Bay
Calaveras Reservoir
Felt Lake
Stevens Creek Reservoir
Vasona Reservoir
Lexington Reservoir
Guadalupe Reservoir
Almaden Reservoir
Calero Reservoir
Anderson Reservoir
Lake Elsman
Chesbro Reservoir
Coyote Reservoir
Uvas Reservoir
Pacheco Lake
Santa Clara Sub-Basin
Coyote Sub-Basin
Llagas Sub-Basin
N
W
E
S
1 0 1 2 Miles
Instream Recharge Locations
Ground Water Sub-Basins and Instream Recharge Locations
In
Santa Clara County
Santa Clara Valley Water District
5750 ALMADEN EXPRESSWAY
SAN JOSE, CA 95118-3686
951201\2000_043\water_ut.apr(L:GW_SUB_11v1) 03/25/00